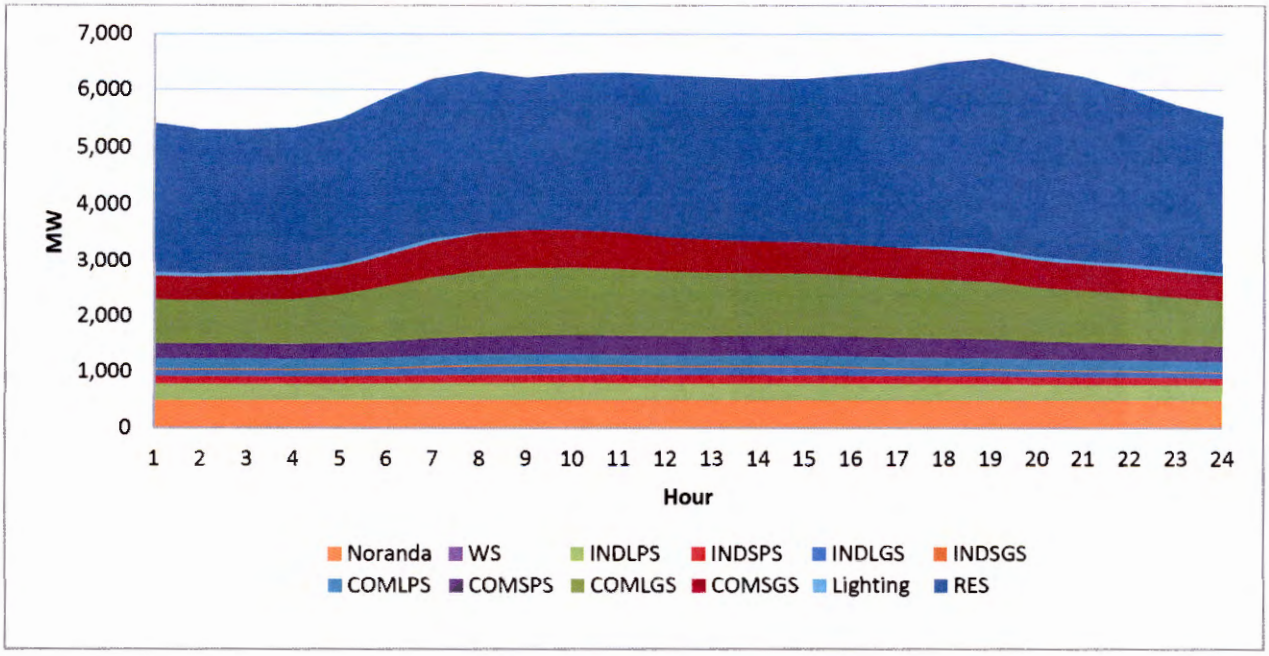
Summer 2015 System Peak Day: Commercial SPS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	95	0.60	13.91	47.42	83	13.44	20.24	25.01	34.50	333
2	98	0.60	13.86	46.74	82	13.42	20.24	24.94	31.96	332
3	98	0.66	13.85	46.95	83	13.55	20.24	24.92	31.95	333
4	97	0.76	13.85	49.72	85	13.75	20.24	24.93	31.95	338
5	97	0.90	14.36	57.34	94	14.22	20.19	25.05	35.00	358
6	104	1.06	15.65	72.27	107	14.96	17.71	25.32	47.70	406
7	109	1.21	17.57	88.78	123	15.79	3.71	25.53	61.96	447
8	115	1.38	19.17	103.82	137	16.68	0.65	25.85	76.97	496
9	113	1.45	20.10	108.32	143	17.08	-	26.36	85.30	515
10	112	1.47	20.00	109.49	145	17.17	-	26.64	92.85	525
11	111	1.49	19.84	109.62	146	17.23	-	26.81	96.62	528
12	111	1.47	20.06	109.88	146	17.28	-	26.83	96.62	529
13	111	1.49	20.13	110.64	147	17.32	-	26.93	96.61	531
14	112	1.49	19.98	111.37	147	17.38	-	26.95	96.32	532
15	110	1.50	19.91	110.96	145	17.35	-	27.01	96.04	528
16	108	1.50	20.41	113.43	148	17.76	-	27.83	90.71	527
17	98	1.39	19.60	106.13	140	16.82	0.35	26.78	79.17	488
18	91	1.28	19.22	95.48	133	16.15	0.89	26.59	67.89	451
19	91	1.16	18.43	89.07	123	15.64	0.95	26.27	64.20	430
20	88	1.03	17.66	79.94	112	15.07	3.82	26.00	55.50	399
21	86	0.92	16.98	74.92	102	14.58	17.65	25.80	49.56	388
22	83	0.85	15.81	67.94	95	14.04	20.18	25.44	43.76	365
23	84	0.76	14.68	56.27	89	13.76	20.24	25.26	40.79	345
24	89	0.63	13.97	48.65	85	13.51	20.24	25.09	36.84	332

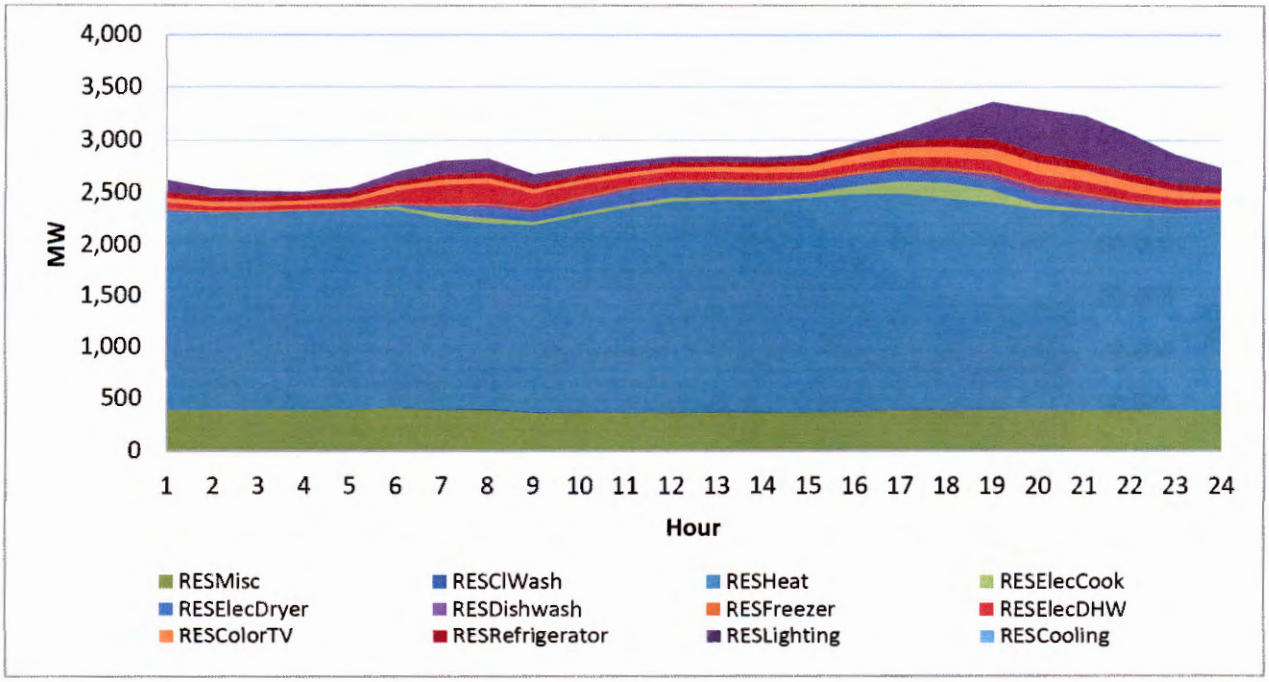
Summer 2015 System Peak Day: Commercial LPS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	68	0.43	9.24	38	54	7.26	11.95	8.56	32.82	231
2	71	0.43	9.22	38	54	7.25	11.95	8.53	31.14	231
3	71	0.47	9.21	38	54	7.32	11.95	8.53	31.15	231
4	70	0.54	9.21	39	55	7.44	11.95	8.53	31.15	233
5	70	0.64	9.49	42	58	7.76	11.92	8.57	33.14	242
6	75	0.76	10.18	46	62	8.32	10.46	8.67	40.83	262
7	79	0.86	11.16	50	66	8.97	2.19	8.74	48.31	275
8	83	0.98	11.99	54	69	9.65	0.38	8.85	55.17	293
9	82	1.03	12.41	54	70	9.96	-	9.03	57.66	296
10	81	1.05	12.34	55	70	10.04	-	9.13	59.71	298
11	79	1.06	12.25	55	71	10.09	-	9.19	60.34	298
12	80	1.05	12.37	55	71	10.13	-	9.19	60.35	298
13	80	1.06	12.39	55	71	10.15	-	9.23	60.35	299
14	80	1.06	12.32	55	72	10.17	-	9.24	60.59	301
15	79	1.07	12.28	56	72	10.12	-	9.26	60.83	301
16	77	1.07	12.61	59	75	10.28	-	9.54	59.58	304
17	70	0.99	12.11	56	72	9.65	0.21	9.18	53.99	285
18	66	0.91	11.91	54	70	9.17	0.52	9.11	49.02	271
19	65	0.83	11.49	52	67	8.81	0.56	9.00	47.54	263
20	63	0.74	11.08	49	64	8.42	2.25	8.90	43.44	251
21	62	0.66	10.75	47	60	8.08	10.42	8.83	40.36	248
22	60	0.60	10.21	45	58	7.71	11.91	8.71	37.16	239
23	61	0.54	9.65	41	56	7.50	11.95	8.65	35.73	232
24	64	0.45	9.26	39	55	7.31	11.95	8.59	33.74	229

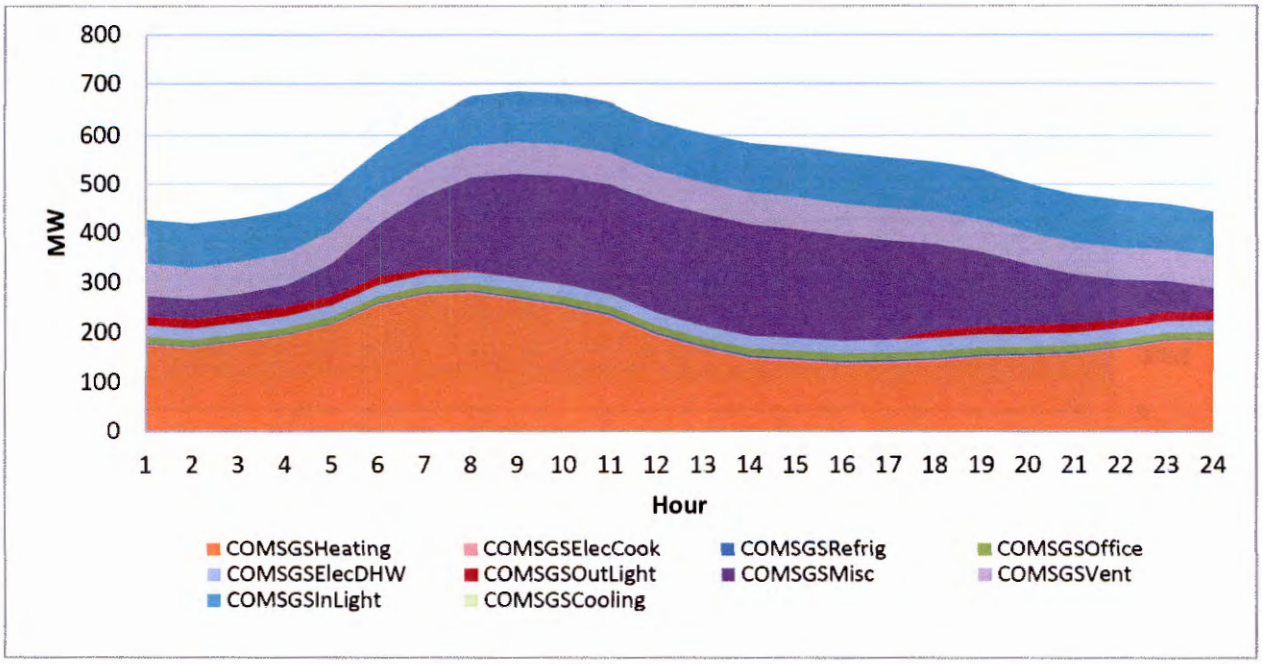
Load Profiles for Winter 2015 System Peak Day (MW)



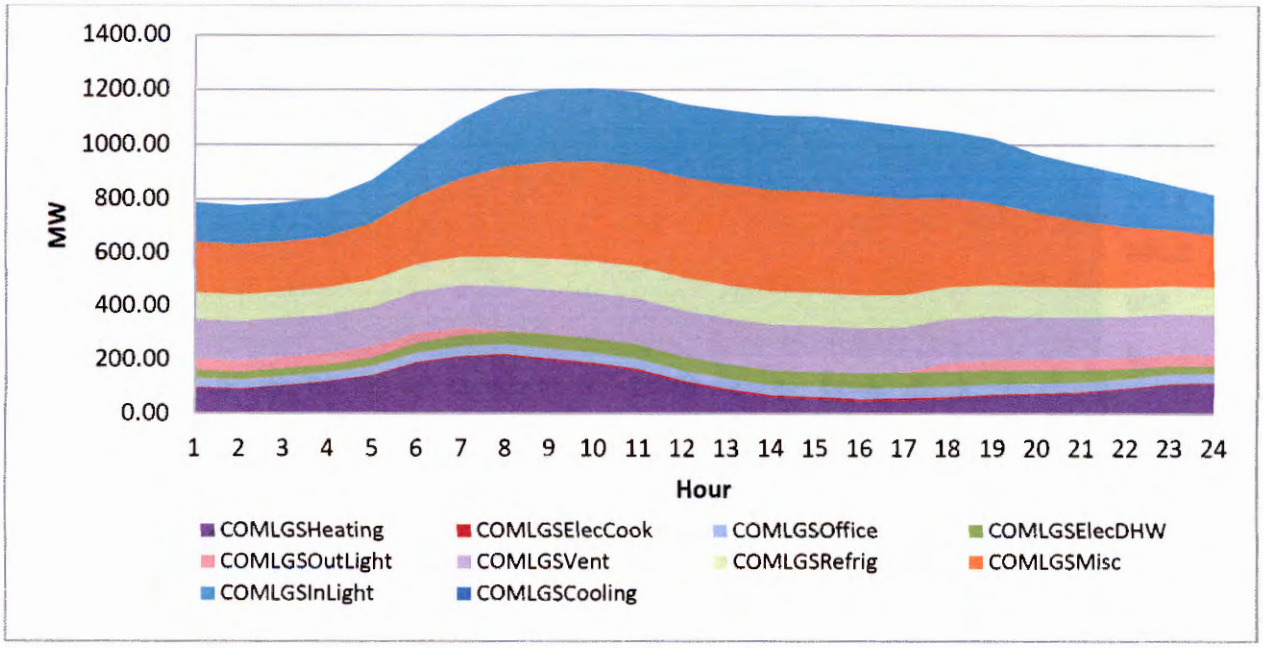
Winter 2015 Peak Day: Residential End-Use Profiles (MW)



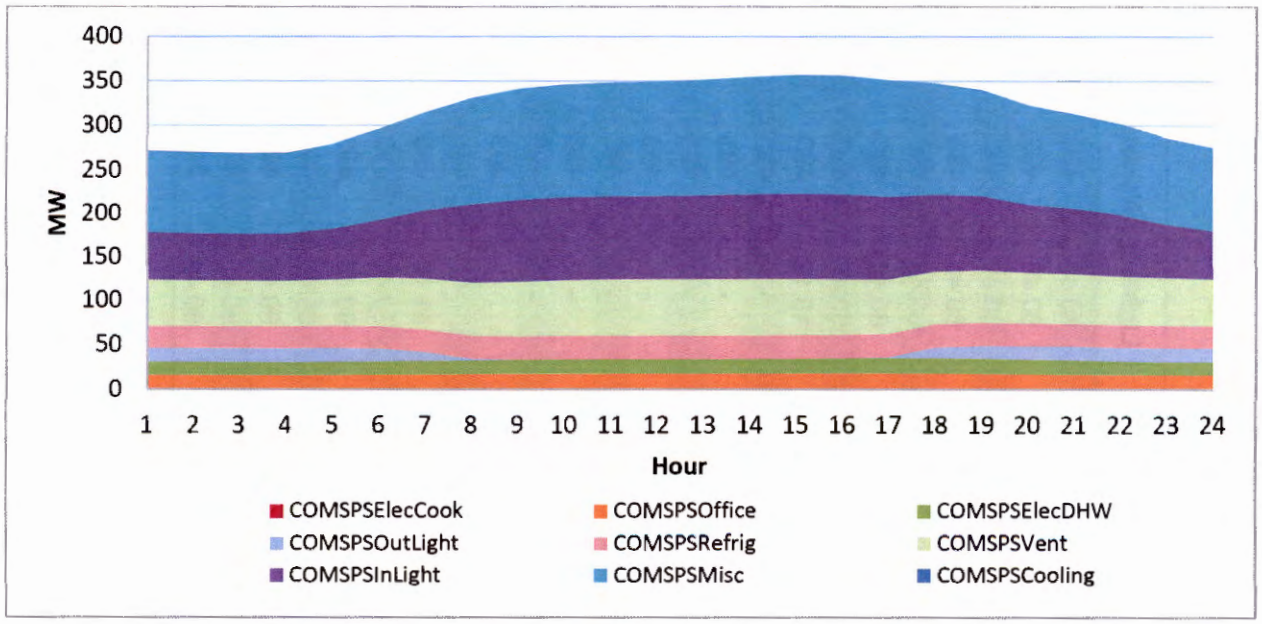
Winter 2015 Peak Day: Commercial SGS End-Use Profiles (MW)



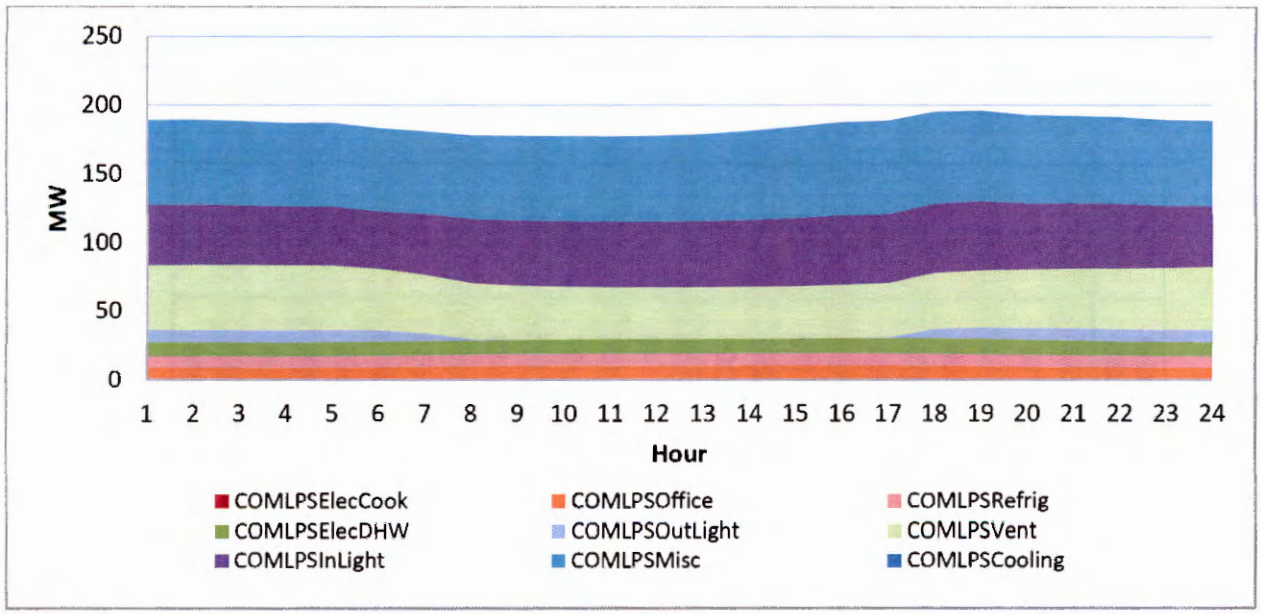
Winter 2015 Peak Day: Commercial LGS End-Use Profiles (MW)



Winter 2015 Peak Day: Commercial SPS End-Use Profiles (MW)



Winter 2015 Peak Day: Commercial LPS End Uses (MW)



Load Profiles for Winter 2015 System Peak Day (MW)

Hour	RES	COM SGS	COM LGS	COM SPS	COM LPS	IND SGS	IND LGS	IND SPS	IND LPS	WS	Lighting	Noranda	Total
1	2,622	427	788	273	189	23.58	119	162	300	-	60.48	493	5,458
2	2,538	419	776	271	190	23.67	122	160	299	-	60.48	493	5,352
3	2,517	430	786	270	189	23.91	123	159	300	-	60.48	493	5,351
4	2,513	446	806	270	187	25.03	121	153	300	-	60.48	493	5,375
5	2,547	491	870	280	187	25.07	126	158	301	-	60.48	493	5,539
6	2,697	568	991	297	183	27.30	133	164	305	-	60.48	493	5,919
7	2,806	632	1,094	315	181	33.72	151	172	313	-	60.48	493	6,253
8	2,828	676	1,172	331	178	36.07	162	176	315	-	15.12	493	6,382
9	2,676	685	1,201	341	178	37.92	165	181	315	-	-	493	6,275
10	2,746	680	1,205	346	178	39.73	165	183	314	-	-	493	6,350
11	2,802	664	1,189	348	178	33.66	165	184	307	-	-	493	6,364
12	2,843	628	1,148	350	178	33.43	157	184	304	-	-	493	6,321
13	2,848	605	1,126	352	179	32.31	154	185	304	-	-	493	6,279
14	2,842	585	1,107	355	182	32.71	160	185	303	-	-	493	6,244
15	2,862	577	1,103	357	185	31.04	158	180	306	-	-	493	6,252
16	2,974	565	1,088	357	188	28.36	151	173	301	-	-	493	6,319
17	3,092	555	1,068	351	189	24.54	134	172	301	-	-	493	6,381
18	3,232	547	1,051	348	195	24.18	130	167	298	-	51.40	493	6,538
19	3,336	528	1,016	338	195	22.84	125	163	296	-	60.43	493	6,572
20	3,290	502	966	323	193	20.59	117	162	294	-	60.48	493	6,421
21	3,232	480	928	313	192	20.82	114	158	291	-	60.48	493	6,283
22	3,064	467	893	302	191	19.93	112	158	290	-	60.48	493	6,052
23	2,866	460	855	287	189	20.25	105	148	292	-	60.48	493	5,776
24	2,740	445	818	276	189	20.42	101	141	290	-	60.48	493	5,573

Winter 2015 System Peak Day: Residential End-Use Profiles (MW)

Hour	Cl. Wash	Refrig.	Misc	Lighting	Heating	Freezer	Dryer	Electric DHW	Cooker	Dish washer	Cooling	TV	Total
1	0.14	58	388	111	1,920	14.19	15.37	55	1.75	15.60	-	42	2,622
2	(0.00)	57	388	66	1,917	13.80	6.05	42	0.96	4.69	-	42	2,538
3	0.12	55	388	47	1,929	13.46	2.52	39	1.15	0.84	-	40	2,517
4	0.46	53	388	30	1,945	13.01	0.33	42	1.59	0.23	-	38	2,513
5	1.68	52	395	44	1,943	12.09	0.00	60	3.52	(0.00)	-	35	2,547
6	6.27	52	408	85	1,931	11.69	10.76	113	24.81	12.61	-	43	2,697
7	11.18	53	389	130	1,857	11.82	59.80	184	44.11	18.19	-	47	2,806
8	15.71	56	390	135	1,805	12.48	91.67	190	50.97	34.35	-	46	2,828
9	12.89	57	362	90	1,820	14.06	78.19	143	29.96	37.06	-	33	2,676
10	12.79	53	364	76	1,903	15.48	104.79	120	26.49	36.56	-	34	2,746
11	11.10	52	364	62	1,983	16.83	120.93	97	28.97	27.78	-	37	2,802
12	9.20	52	367	50	2,041	17.75	121.31	86	34.00	25.69	-	39	2,843
13	8.08	52	366	49	2,058	19.07	113.38	79	30.72	28.97	-	43	2,848
14	7.77	52	366	49	2,060	20.25	102.10	76	28.60	29.13	-	50	2,842
15	7.63	54	368	48	2,083	21.04	92.04	73	34.28	21.89	-	58	2,862
16	8.30	60	378	57	2,104	21.70	96.96	81	70.13	21.88	-	76	2,974
17	8.48	69	390	92	2,098	21.57	97.96	92	111.56	21.66	-	89	3,092
18	8.62	81	386	210	2,060	20.65	96.19	103	137.63	30.88	-	97	3,232
19	8.10	95	386	342	2,002	19.84	95.40	115	112.07	56.22	-	104	3,336
20	6.81	92	387	412	1,959	18.94	91.94	113	41.84	62.52	-	105	3,290
21	5.71	87	387	427	1,936	18.28	85.51	104	22.46	54.69	-	104	3,232
22	2.82	80	387	378	1,909	17.35	72.12	84	10.68	33.31	-	90	3,064
23	0.94	67	388	279	1,901	16.43	53.28	66	3.70	20.67	-	70	2,866
24	0.05	61	387	182	1,934	14.85	28.79	60	0.38	17.68	-	55	2,740

Winter 2015 System Peak Day: Commercial SGS End-Use Profiles (MW)

Hour	Refrig	Outdoor Light	Office	Misc	Indoor Light	Heating	Electric DHW	Electric Cook	Cooling	Vent	Total
1	1.77	18.72	13.84	41	89	174	21.98	2.20	-	64	427
2	1.68	18.72	13.83	40	89	168	21.91	2.20	-	64	419
3	1.65	18.72	13.79	39	88	180	21.89	1.99	-	64	430
4	1.67	18.72	13.75	44	87	194	21.89	1.51	-	64	446
5	1.81	18.71	13.87	66	88	215	22.31	2.03	-	64	491
6	2.11	17.51	14.00	105	86	255	22.45	2.61	-	64	568
7	2.33	11.96	14.23	147	92	275	22.73	3.11	-	64	632
8	2.67	2.33	14.60	190	97	279	22.54	3.66	-	64	676
9	3.13	-	14.93	212	99	265	23.27	3.86	-	64	685
10	3.46	-	15.03	220	100	250	23.59	3.94	-	64	680
11	3.53	-	15.10	223	100	230	23.87	3.98	-	64	664
12	3.55	-	15.13	225	100	193	23.80	3.97	-	64	628
13	3.64	-	15.18	227	101	167	23.95	4.03	-	64	605
14	3.66	-	15.33	225	102	147	24.05	4.06	-	64	585
15	3.70	-	15.45	220	104	142	24.32	4.01	-	64	577
16	3.65	-	15.65	212	106	136	24.70	3.89	-	64	565
17	3.47	0.88	15.75	199	105	138	25.16	3.78	-	64	555
18	3.31	14.41	15.37	174	104	142	25.50	3.49	-	64	547
19	3.04	16.98	15.01	148	103	149	25.10	3.19	-	64	528
20	2.84	18.08	14.64	123	99	153	24.51	2.89	-	64	502
21	2.62	18.65	14.39	99	98	157	24.00	2.78	-	64	480
22	2.30	18.72	14.25	79	96	168	22.31	2.66	-	64	467
23	2.08	18.72	14.05	62	92	183	21.89	2.44	-	64	460
24	1.87	18.72	13.88	48	90	185	22.06	2.22	-	64	445

Winter 2015 System Peak Day: Commercial LGS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Heating	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	-	4.04	29.90	92	147	191	33.29	42.08	100	148	788
2	-	4.04	29.54	86	146	190	33.27	42.08	99	147	776
3	-	3.66	29.43	100	144	188	33.17	42.08	99	147	786
4	-	2.78	29.43	115	146	191	33.10	42.08	99	147	806
5	-	3.74	31.73	138	158	214	33.47	42.07	101	149	870
6	-	4.79	36.47	185	181	251	33.96	39.36	105	154	991
7	-	5.71	43.49	207	218	292	34.70	26.94	107	160	1,094
8	-	6.72	47.55	213	251	337	35.78	5.28	112	165	1,172
9	-	7.09	52.61	196	263	360	36.66	-	117	169	1,201
10	-	7.24	53.46	180	266	369	36.93	-	121	171	1,205
11	-	7.32	53.91	156	266	372	37.12	-	122	173	1,189
12	-	7.30	54.27	112	267	375	37.21	-	122	173	1,148
13	-	7.42	54.93	82	270	379	37.32	-	123	173	1,126
14	-	7.45	54.73	58	272	381	37.67	-	123	173	1,107
15	-	7.37	55.16	53	274	380	37.93	-	124	172	1,103
16	-	7.14	55.78	46	273	374	38.36	-	123	170	1,088
17	-	6.95	56.55	48	265	362	38.50	2.04	121	168	1,068
18	-	6.41	56.55	54	245	335	37.48	32.64	119	165	1,051
19	-	5.87	53.84	62	235	305	36.53	38.35	115	163	1,016
20	-	5.32	50.54	68	216	278	35.54	40.72	113	160	966
21	-	5.10	47.00	73	207	252	34.85	41.94	110	157	928
22	-	4.90	38.10	87	194	231	34.43	42.08	107	155	893
23	-	4.49	32.78	105	167	213	33.88	42.08	104	153	855
24	-	4.08	30.42	108	150	198	33.42	42.08	102	150	818

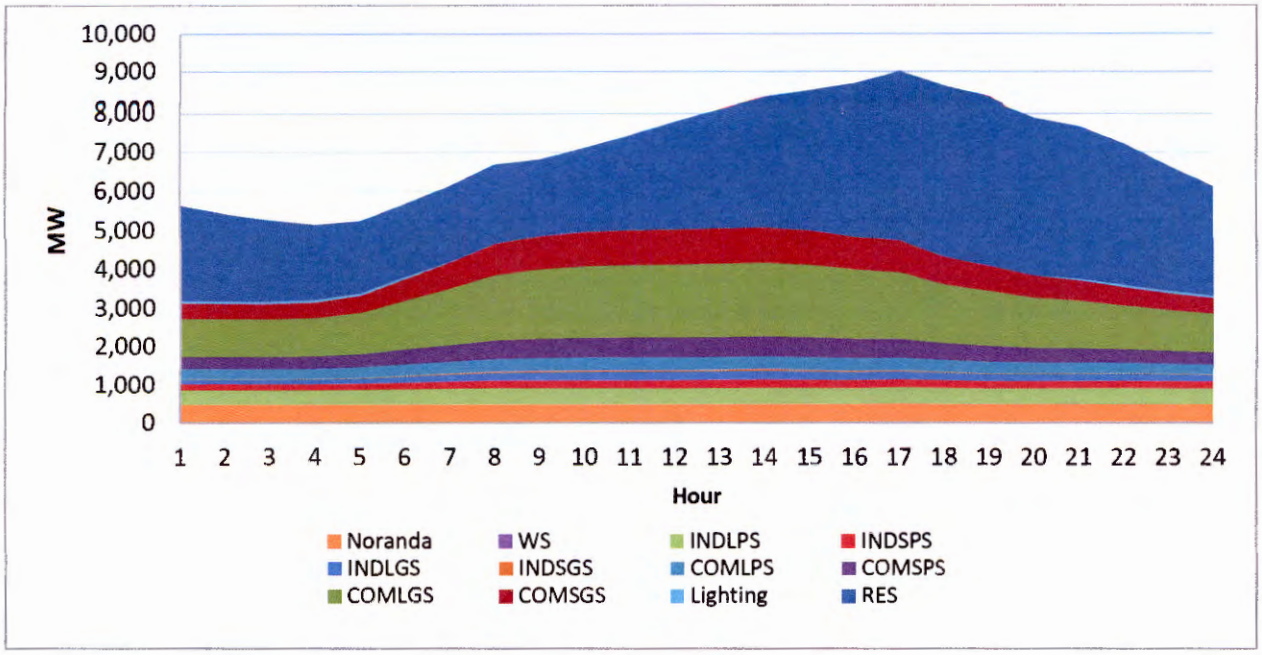
Winter 2015 System Peak Day: Commercial SPS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	-	0.72	14.85	55	95	15.05	15.39	24.78	52	273
2	-	0.72	14.81	55	94	15.04	15.39	24.71	51	271
3	-	0.66	14.79	54	93	14.99	15.39	24.68	51	270
4	-	0.50	14.79	55	94	14.95	15.39	24.70	51	270
5	-	0.67	15.10	59	98	15.03	15.38	24.82	52	280
6	-	0.86	15.26	67	104	15.07	14.39	25.08	55	297
7	-	1.02	15.55	79	111	15.20	9.83	25.30	58	315
8	-	1.20	15.48	91	121	15.49	1.91	25.63	60	331
9	-	1.27	16.04	95	126	15.79	-	26.03	62	341
10	-	1.30	16.26	96	128	15.88	-	26.31	63	346
11	-	1.31	16.45	96	128	15.95	-	26.36	64	348
12	-	1.31	16.41	96	129	15.98	-	26.36	64	350
13	-	1.33	16.52	97	131	16.02	-	26.42	64	352
14	-	1.34	16.58	98	132	16.20	-	26.45	64	355
15	-	1.32	16.76	99	134	16.34	-	26.47	63	357
16	-	1.28	17.02	99	134	16.60	-	26.43	62	357
17	-	1.24	17.34	96	132	16.76	0.72	26.28	61	351
18	-	1.15	17.56	89	126	16.42	11.84	26.10	60	348
19	-	1.05	17.26	86	119	16.09	13.95	25.79	59	338
20	-	0.95	16.82	79	113	15.73	14.86	25.64	58	323
21	-	0.91	16.43	76	107	15.51	15.33	25.44	56	313
22	-	0.88	15.19	72	103	15.40	15.38	25.20	55	302
23	-	0.80	14.84	62	99	15.23	15.39	25.02	54	287
24	-	0.73	14.92	56	96	15.09	15.39	24.86	53	276

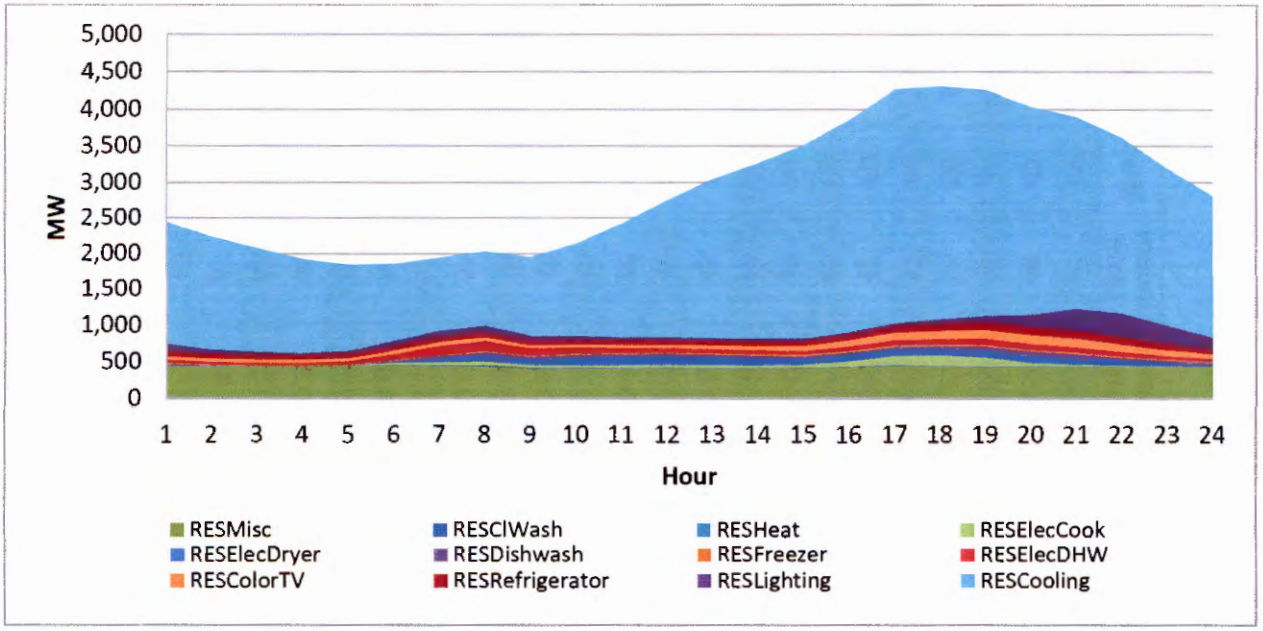
Winter 2015 System Peak Day: Commercial LPS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	-	0.52	9.86	44	61	8.14	9.09	8.48	48	189
2	-	0.52	9.84	44	61	8.13	9.09	8.46	48	190
3	-	0.47	9.83	44	61	8.11	9.09	8.45	48	189
4	-	0.36	9.83	43	60	8.10	9.09	8.46	48	187
5	-	0.48	9.97	43	60	8.22	9.09	8.50	47	187
6	-	0.61	9.92	42	60	8.40	8.50	8.59	45	183
7	-	0.73	9.87	45	60	8.65	5.81	8.67	43	181
8	-	0.86	9.67	47	61	8.98	1.13	8.78	41	178
9	-	0.91	9.90	48	62	9.23	-	8.92	40	178
10	-	0.92	10.03	48	62	9.30	-	9.02	39	178
11	-	0.93	10.15	48	62	9.36	-	9.04	38	178
12	-	0.93	10.11	48	63	9.38	-	9.04	38	178
13	-	0.95	10.16	48	63	9.41	-	9.06	38	179
14	-	0.95	10.22	49	65	9.49	-	9.07	38	182
15	-	0.94	10.33	50	67	9.55	-	9.08	38	185
16	-	0.91	10.51	51	68	9.63	-	9.06	39	188
17	-	0.89	10.71	51	68	9.63	0.43	9.01	40	189
18	-	0.82	10.87	50	66	9.34	7.00	8.95	41	195
19	-	0.75	10.75	50	65	9.08	8.24	8.84	42	195
20	-	0.68	10.55	48	64	8.80	8.78	8.79	43	193
21	-	0.65	10.39	48	63	8.60	9.06	8.72	44	192
22	-	0.63	9.81	47	63	8.47	9.09	8.63	45	191
23	-	0.57	9.74	45	62	8.31	9.09	8.57	46	189
24	-	0.52	9.89	44	62	8.18	9.09	8.51	47	189

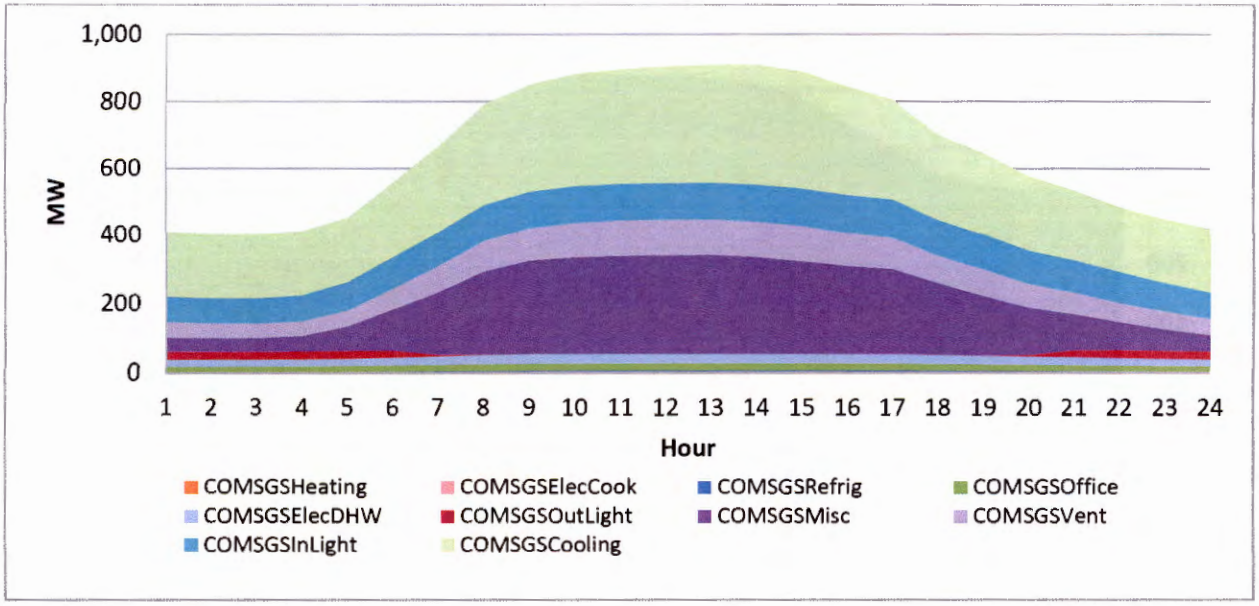
Load Profiles for Summer 2020 System Peak Day (MW)



Summer 2020 Peak Day: Residential End-Use Profiles (MW)



Summer 2020 Peak Day: Commercial SGS End-Use Profiles (MW)



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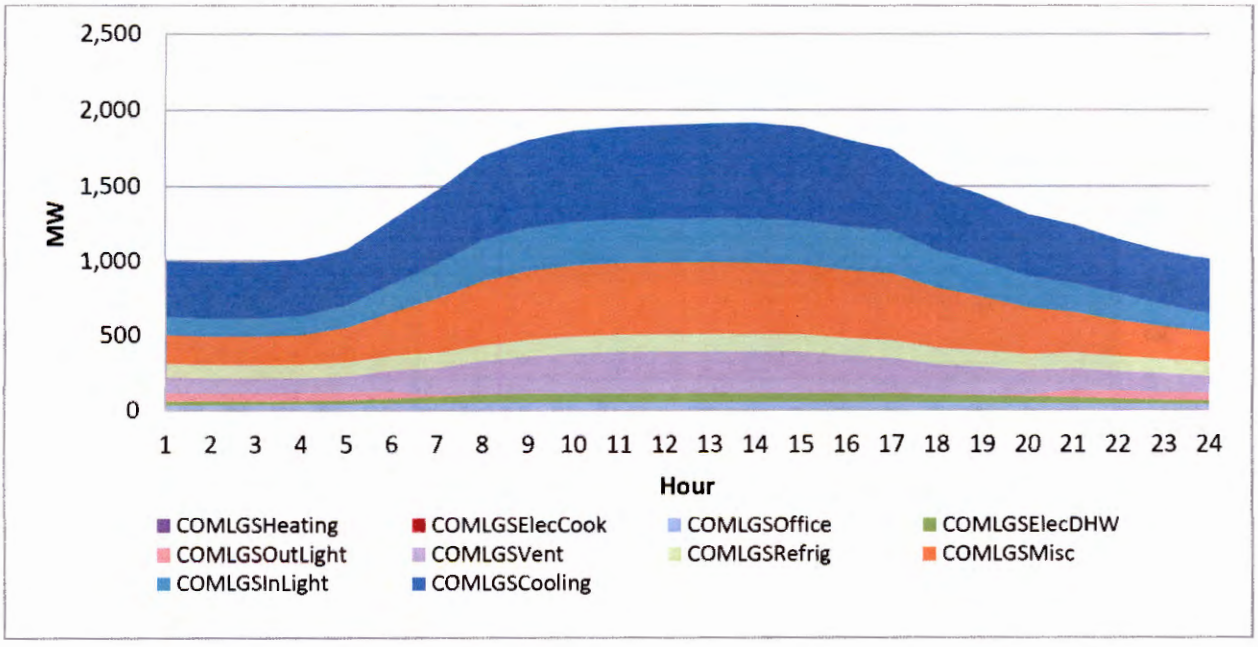
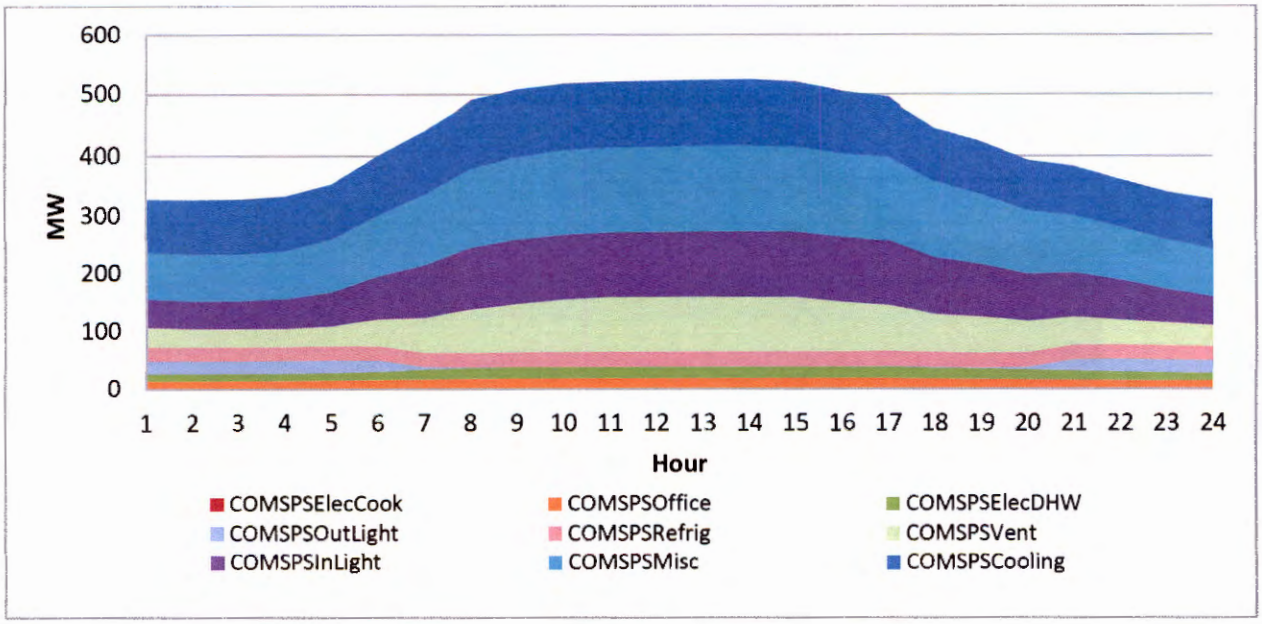
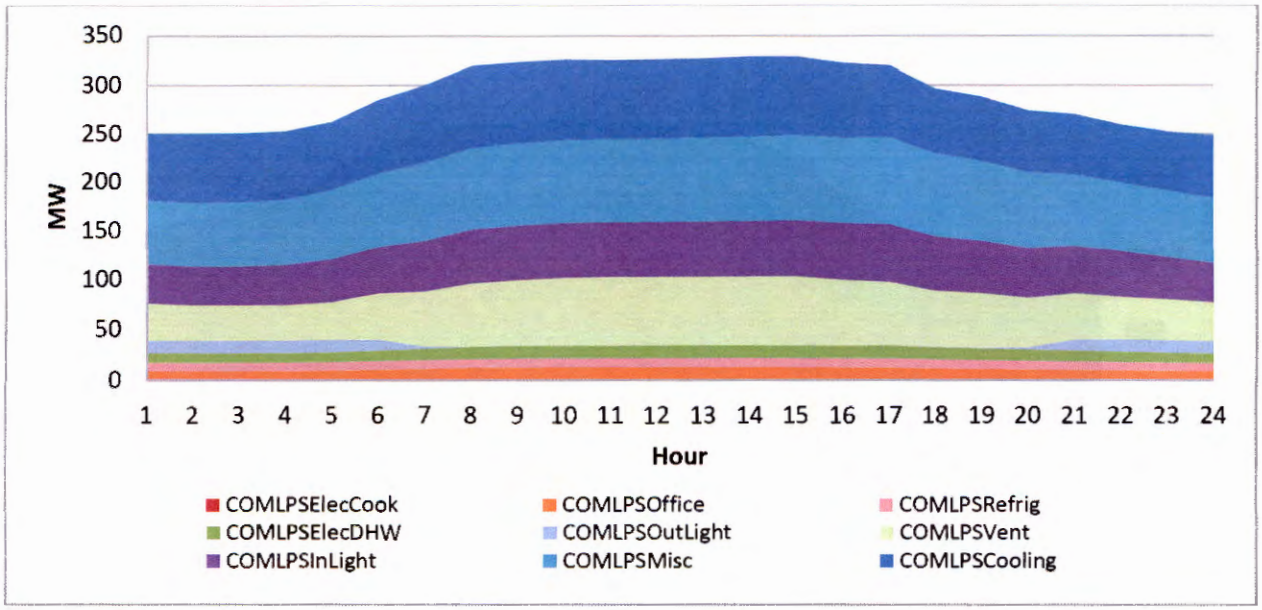


Summer 2020 Peak Day: Commercial SPS End-Use Profiles (MW)



Summer 2020 Peak Day: Commercial LPS End-Use Profiles (MW)



Load Profiles for Summer 2020 System Peak Day (MW)

Hour	RES	COM SGS	COM LGS	COM SPS	COM LPS	IND SGS	IND LGS	IND SPS	IND LPS	WS	Lighting	Noranda	Total
1	2,435	411	1,001	343	251	11.84	116	184	368	-	58.13	492	5,673
2	2,234	406	992	342	251	11.71	117	185	371	-	58.13	492	5,459
3	2,076	405	992	343	251	11.33	118	183	368	-	58.13	492	5,299
4	1,927	413	1,007	348	254	11.83	123	184	370	-	58.13	492	5,190
5	1,847	454	1,081	369	263	14.06	136	189	380	-	58.13	492	5,285
6	1,860	560	1,280	420	285	20.43	160	200	392	-	51.34	492	5,723
7	1,947	670	1,477	465	301	25.01	184	215	407	-	-	492	6,183
8	2,033	794	1,703	517	320	30.50	202	226	423	-	-	492	6,742
9	1,955	851	1,805	537	324	37.84	212	233	418	-	-	492	6,866
10	2,140	884	1,865	548	326	37.99	222	237	416	-	-	492	7,169
11	2,415	898	1,888	551	326	35.97	225	242	413	-	-	492	7,488
12	2,747	907	1,902	553	327	34.19	225	244	411	-	-	492	7,841
13	3,047	911	1,913	555	327	34.30	223	248	419	-	-	492	8,169
14	3,267	911	1,916	556	329	34.24	231	250	424	-	-	492	8,410
15	3,510	891	1,890	551	329	32.88	219	249	416	-	-	492	8,581
16	3,972	870	1,861	550	332	31.82	219	250	424	-	-	507	9,018
17	4,158	785	1,695	510	312	24.14	203	236	412	-	-	492	8,828
18	4,309	705	1,539	472	297	20.64	197	230	422	-	-	492	8,684
19	4,261	648	1,442	448	288	16.46	181	228	402	-	-	492	8,407
20	4,038	579	1,314	415	274	13.62	182	224	403	-	-	492	7,935
21	3,900	536	1,245	402	271	12.26	182	223	409	-	37.78	492	7,710
22	3,610	486	1,147	378	260	12.82	182	223	414	-	58.13	492	7,265
23	3,195	449	1,067	357	253	12.25	176	220	409	-	58.13	492	6,689
24	2,806	421	1,012	344	249	14.31	159	215	405	-	58.13	492	6,176

Summer 2020 System Peak Day: Residential End-Use Profiles

Hour	Cl. Wash	Refrig.	Misc	Lighting	Heating	Freezer	Dryer	Electric DHW	Cooker	Dish washer	Cooling	TV	Total
1	0.14	71	438	98	1.25	17.27	15.55	39	1.82	15.76	1,689	48	2,435
2	(0.00)	69	438	54	1.22	16.79	6.12	30	1.00	4.74	1,565	48	2,234
3	0.11	67	438	39	1.18	16.38	2.55	28	1.20	0.85	1,437	46	2,076
4	0.45	66	438	23	1.14	15.83	0.33	30	1.65	0.23	1,307	44	1,927
5	1.62	65	446	36	1.12	14.70	0.00	43	3.66	(0.00)	1,196	40	1,847
6	6.05	64	461	66	-	14.22	10.89	80	25.79	12.73	1,071	49	1,860
7	10.78	66	440	86	1.11	14.38	60.50	130	45.85	18.37	1,022	54	1,947
8	15.15	70	440	87	1.17	15.18	92.75	134	52.98	34.70	1,038	52	2,033
9	12.43	71	409	63	1.24	17.11	79.10	101	31.14	37.43	1,096	38	1,955
10	12.33	66	411	51	1.34	18.84	106.02	84	27.53	36.92	1,285	39	2,140
11	10.71	66	411	40	1.47	20.47	122.35	69	30.11	28.05	1,574	43	2,415
12	8.87	65	414	35	1.59	21.59	122.74	60	35.34	25.94	1,911	45	2,747
13	7.79	65	413	34	1.70	23.20	114.71	56	31.93	29.26	2,220	49	3,047
14	7.49	67	413	32	1.79	24.64	103.29	54	29.73	29.42	2,448	57	3,267
15	7.36	70	416	29	1.83	25.60	93.12	52	35.63	22.11	2,692	66	3,510
16	8.25	79	439	30	1.81	27.19	101.03	59	75.07	22.76	3,040	89	3,972
17	8.18	87	441	32	1.62	26.24	99.11	65	115.96	21.88	3,158	102	4,158
18	8.31	101	436	53	1.60	25.12	97.32	73	143.05	31.18	3,227	111	4,309
19	7.82	112	436	76	1.60	24.16	96.59	81	116.57	56.83	3,132	119	4,261
20	6.56	109	437	167	1.57	23.04	93.02	80	43.49	63.14	2,894	120	4,038
21	5.51	105	437	301	1.49	22.23	86.52	74	23.34	55.23	2,671	119	3,900
22	2.72	100	437	320	1.44	21.11	72.96	59	11.10	33.64	2,448	103	3,610
23	0.91	86	438	245	1.40	19.99	53.90	46	3.84	20.87	2,200	80	3,195
24	0.05	77	437	151	1.33	18.07	29.13	42	0.40	17.85	1,970	62	2,806

Summer 2020 System Peak Day: Commercial SGS End-Use Profiles

Hour	Refrig	Outdoor Light	Office	Misc	Indoor Light	Heating	Electric DHW	Electric Cook	Cooling	Vent	Total
1	1.64	23.82	13.81	41	75	0.08	19.38	1.78	190	46	411
2	1.56	23.82	13.79	39	74	0.08	19.32	1.78	189	43	406
3	1.54	23.82	13.93	39	74	0.08	19.31	1.92	188	43	405
4	1.55	23.82	14.14	45	77	0.09	19.31	2.23	187	43	413
5	1.69	23.77	14.66	72	83	0.10	19.99	2.65	190	46	454
6	1.96	20.85	15.54	122	91	-	21.68	3.12	224	60	560
7	2.17	4.37	16.53	184	100	0.12	24.19	3.55	260	75	670
8	2.48	0.76	17.57	243	108	0.12	26.29	4.06	303	89	794
9	2.92	-	18.05	272	110	0.11	27.47	4.26	320	96	851
10	3.23	-	18.16	282	111	0.11	27.32	4.33	336	103	884
11	3.31	-	18.24	286	111	0.10	27.12	4.36	343	106	898
12	3.33	-	18.29	287	111	0.09	27.41	4.33	349	106	907
13	3.41	-	18.34	288	111	0.08	27.49	4.36	353	106	911
14	3.44	-	18.39	281	112	0.07	27.29	4.36	358	106	911
15	3.48	-	18.33	269	113	0.07	27.20	4.39	350	106	891
16	3.53	-	18.69	263	118	0.07	27.85	4.40	333	101	870
17	3.26	0.41	17.67	239	113	0.06	26.79	4.07	291	90	785
18	3.11	1.05	16.90	208	108	0.07	26.29	3.75	258	79	705
19	2.85	1.12	16.32	173	104	0.10	25.25	3.41	246	75	648
20	2.66	4.50	15.68	139	98	0.10	24.24	3.03	225	67	579
21	2.45	20.77	15.13	106	94	0.11	23.35	2.70	210	61	536
22	2.14	23.75	14.52	82	89	0.11	21.87	2.49	195	55	486
23	1.93	23.82	14.18	63	81	0.12	20.40	2.23	190	52	449
24	1.74	23.82	13.89	48	76	0.13	19.46	1.84	188	48	421

Summer 2020 System Peak Day: Commercial LGS End-Use Profiles

Hour	Cooling	Electric Cook	Electric DHW	Heating	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	376	3.25	26	0.04	122	191	33	53.42	93	104	1,001
2	379	3.25	26	0.04	120	188	33	53.42	92	97	992
3	378	3.52	26	0.04	120	189	33	53.42	92	97	992
4	376	4.09	26	0.05	128	198	34	53.42	92	97	1,007
5	379	4.86	28	0.06	148	233	35	53.29	94	106	1,081
6	434	5.72	35	-	190	293	38	46.76	97	142	1,280
7	491	6.51	46	0.08	235	366	40	9.81	99	183	1,477
8	558	7.43	55	0.09	277	432	43	1.72	103	225	1,703
9	582	7.80	61	0.08	289	464	44	-	109	248	1,805
10	603	7.93	61	0.07	292	474	44	-	113	269	1,865
11	610	7.99	60	0.06	293	479	45	-	114	279	1,888
12	620	7.93	62	0.05	294	481	45	-	114	279	1,902
13	625	7.99	62	0.03	296	483	45	-	115	279	1,913
14	632	7.99	61	0.03	298	478	45	-	116	278	1,916
15	620	8.05	61	0.02	296	467	45	-	116	278	1,890
16	593	8.07	62	0.02	302	468	46	-	119	263	1,861
17	521	7.45	59	0.02	282	437	43	0.95	113	230	1,695
18	468	6.87	58	0.02	253	401	41	2.37	111	199	1,539
19	450	6.26	53	0.04	235	359	40	2.51	108	188	1,442
20	417	5.56	49	0.04	210	314	38	10.10	105	164	1,314
21	394	4.95	45	0.05	197	272	37	46.59	103	147	1,245
22	369	4.56	37	0.05	178	241	35	53.26	99	130	1,147
23	363	4.08	30	0.07	146	218	34	53.42	96	122	1,067
24	367	3.37	26	0.07	125	199	33	53.42	94	111	1,012

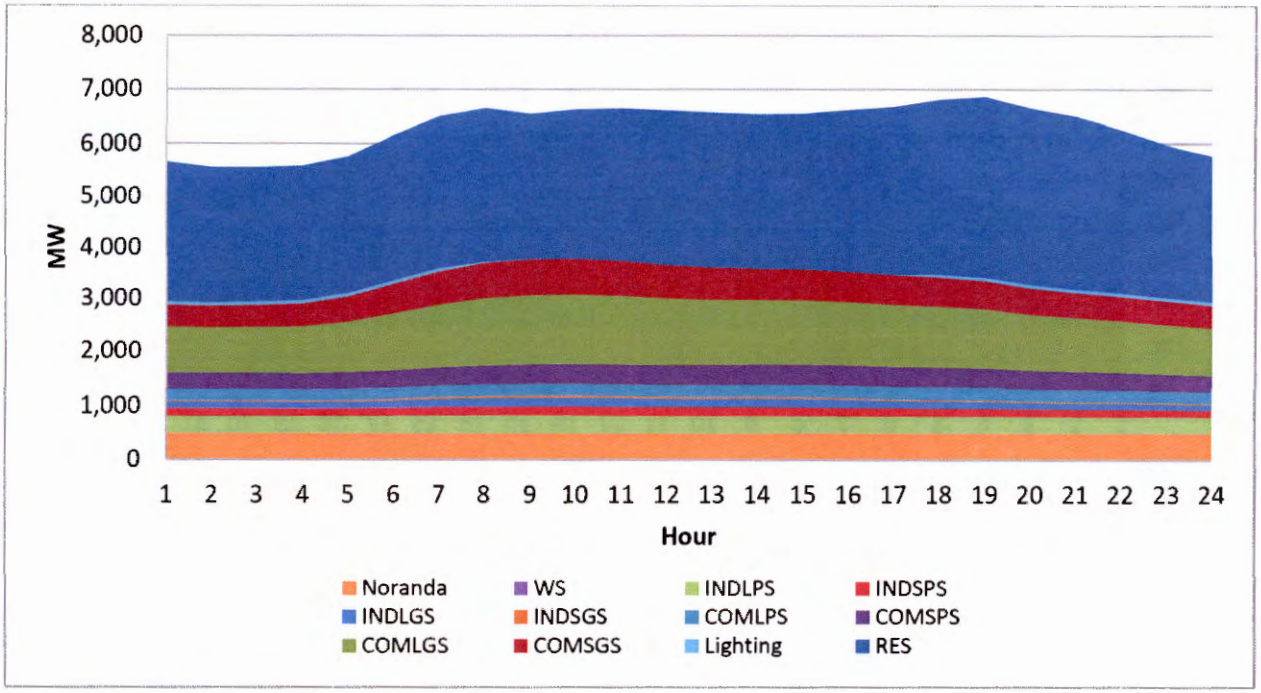
Summer 2020 System Peak Day: Commercial SPS End-Use Profiles

Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	92	0.59	13.25	46	96	15.20	19.81	23.31	37	343
2	94	0.59	13.20	46	95	15.18	19.81	23.24	34	342
3	95	0.64	13.19	46	96	15.33	19.81	23.22	34	343
4	94	0.74	13.19	49	98	15.55	19.81	23.23	34	348
5	93	0.88	13.68	56	109	16.08	19.76	23.35	38	369
6	100	1.04	14.91	71	124	16.92	17.34	23.59	51	420
7	106	1.18	16.74	87	142	17.86	3.63	23.79	67	465
8	112	1.35	18.26	102	158	18.86	0.63	24.09	83	517
9	110	1.42	19.15	106	165	19.32	-	24.57	92	537
10	109	1.44	19.05	107	167	19.42	-	24.83	100	548
11	107	1.45	18.90	107	168	19.49	-	24.98	104	551
12	107	1.44	19.11	108	169	19.54	-	25.00	104	553
13	107	1.45	19.17	108	170	19.59	-	25.09	104	555
14	108	1.45	19.03	109	170	19.66	-	25.12	104	556
15	106	1.46	18.96	109	168	19.62	-	25.17	103	551
16	104	1.47	19.41	111	171	20.06	-	25.89	97	550
17	94	1.36	18.66	104	162	19.03	0.34	24.96	85	510
18	88	1.25	18.30	93	153	18.27	0.87	24.78	73	472
19	88	1.14	17.56	87	142	17.69	0.93	24.48	69	448
20	85	1.01	16.82	78	130	17.05	3.74	24.23	60	415
21	83	0.90	16.17	73	118	16.50	17.27	24.04	53	402
22	80	0.83	15.06	67	109	15.89	19.75	23.70	47	378
23	81	0.74	13.99	55	103	15.56	19.81	23.54	44	357
24	86	0.61	13.30	48	98	15.28	19.81	23.38	40	344

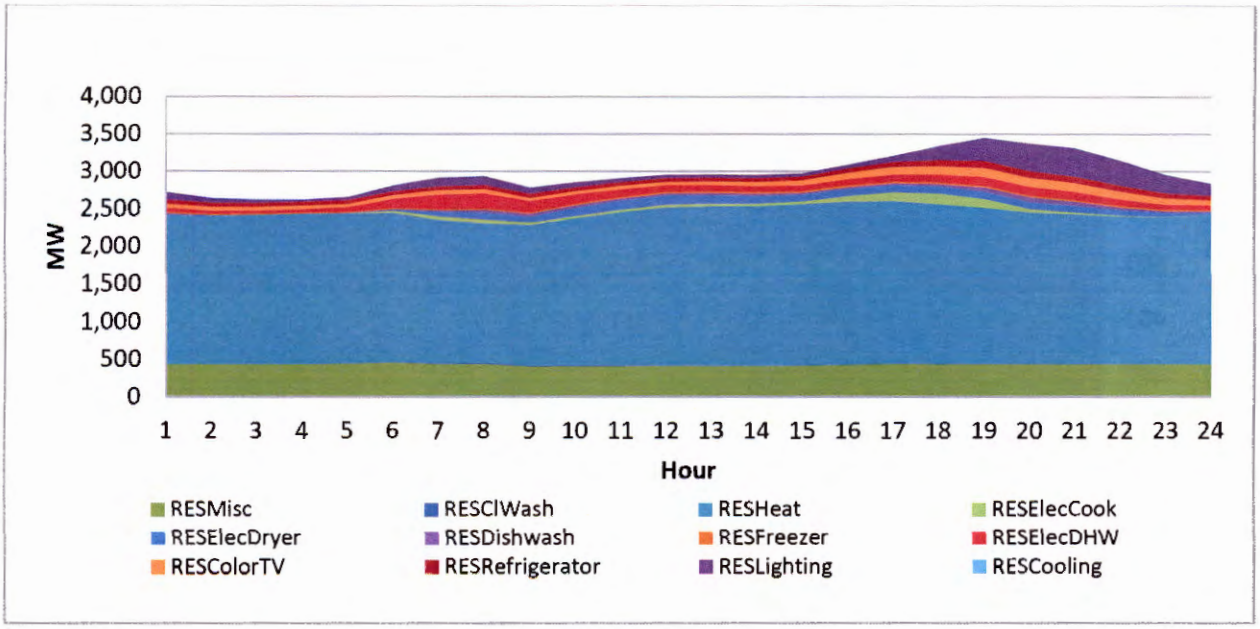
Summer 2020 System Peak Day: Commercial LPS End-Use Profiles

Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	70	0.44	9.26	39	66	8.64	12.31	8.39	37	251
2	72	0.44	9.24	39	66	8.63	12.31	8.37	35	251
3	72	0.48	9.23	39	66	8.71	12.31	8.36	35	251
4	72	0.56	9.23	40	67	8.85	12.31	8.37	35	254
5	71	0.66	9.52	44	71	9.23	12.28	8.41	37	263
6	76	0.78	10.20	47	76	9.91	10.77	8.50	46	285
7	80	0.89	11.19	52	81	10.68	2.26	8.57	55	301
8	85	1.01	12.01	55	84	11.48	0.39	8.68	62	320
9	83	1.06	12.44	56	85	11.86	-	8.85	65	324
10	82	1.08	12.37	56	86	11.96	-	8.95	68	326
11	81	1.09	12.28	56	86	12.01	-	9.01	68	326
12	81	1.08	12.40	56	86	12.05	-	9.01	68	327
13	81	1.09	12.42	57	87	12.09	-	9.05	68	327
14	82	1.09	12.35	57	87	12.10	-	9.06	69	329
15	80	1.10	12.31	58	88	12.04	-	9.08	69	329
16	79	1.10	12.61	60	91	12.22	-	9.34	67	332
17	71	1.02	12.14	58	88	11.48	0.21	9.00	61	312
18	67	0.94	11.94	56	85	10.92	0.54	8.93	55	297
19	66	0.85	11.52	54	82	10.49	0.58	8.82	54	288
20	64	0.76	11.11	51	78	10.02	2.32	8.73	49	274
21	63	0.67	10.77	49	73	9.62	10.73	8.66	46	271
22	61	0.62	10.24	46	70	9.18	12.27	8.54	42	260
23	62	0.56	9.67	43	68	8.92	12.31	8.48	40	253
24	65	0.46	9.29	40	67	8.70	12.31	8.42	38	249

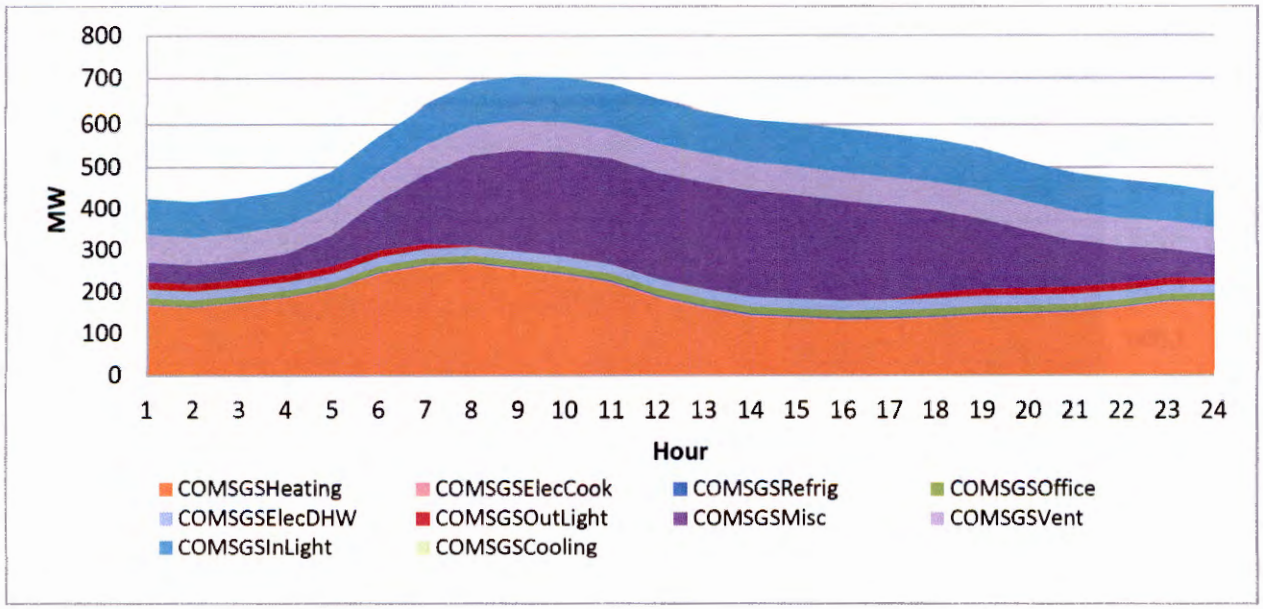
Load Profiles for Winter 2020 System Peak Day (MW)



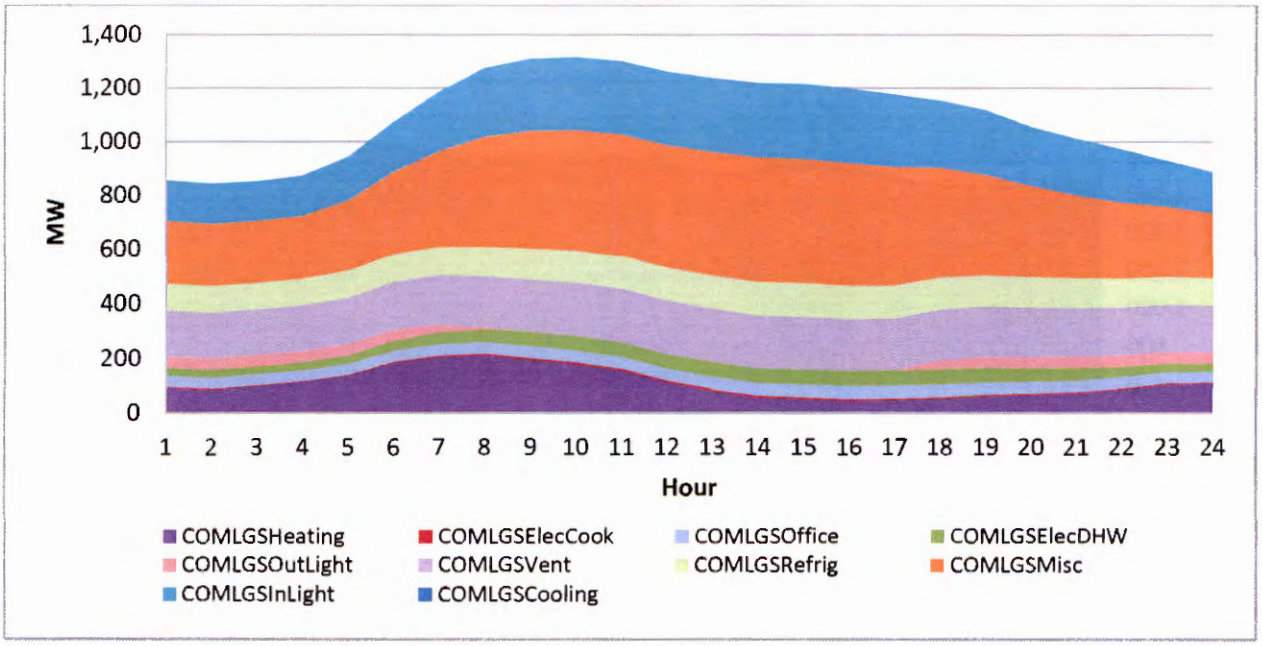
Winter 2020 System Peak Day: Residential End-Use Profiles



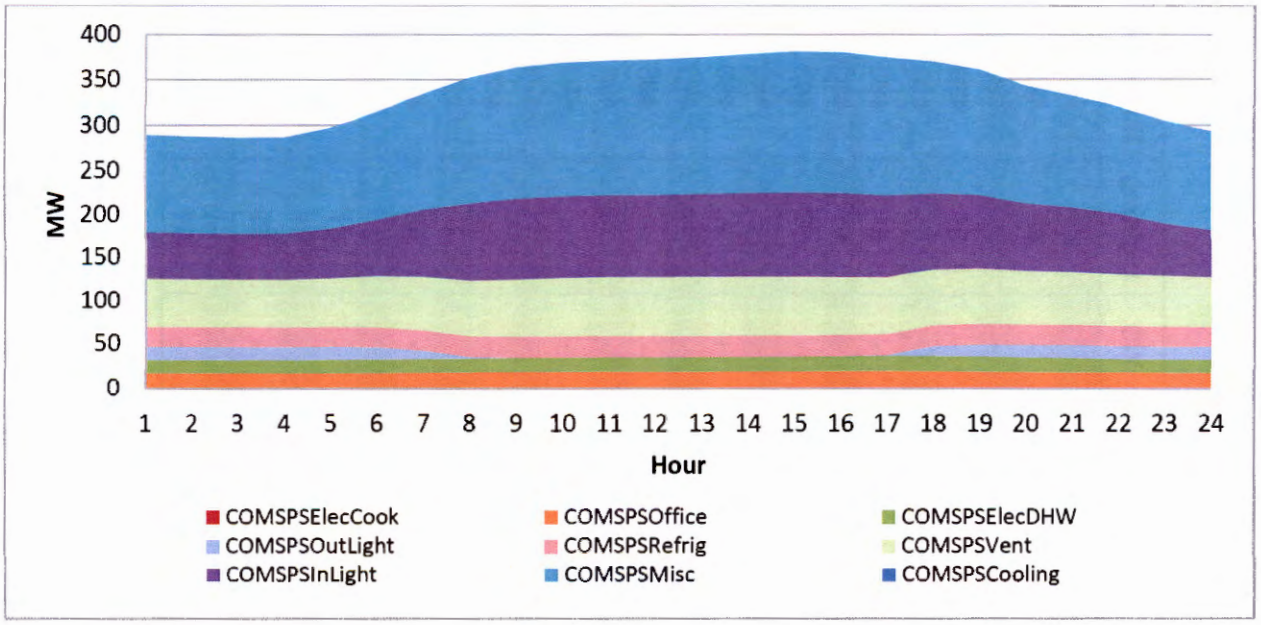
Winter 2020 System Peak Day: Commercial SGS End-Use Profiles (MW)



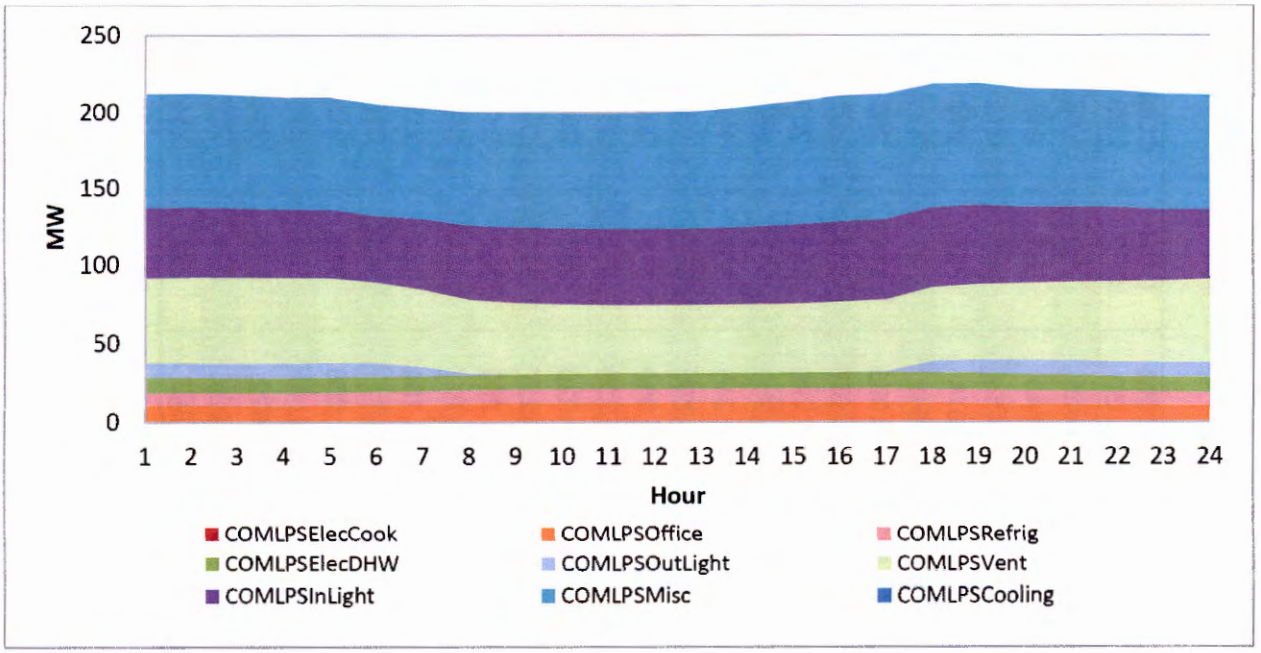
Winter 2020 System Peak Day: Commercial LGS End-Use Profiles (MW)



Winter 2020 System Peak Day: Commercial SPS End-Use Profiles (MW)



Winter 2020 System Peak Day: Commercial LPS End-Use Profiles (MW)



Load Profiles for Winter 2020 System Peak Day (MW)

Hour	RES	COM SGS	COM LGS	COM SPS	COM LPS	IND SGS	IND LGS	IND SPS	IND LPS	WS	Lighting	Noranda	Total
1	2,721	426	856	289	212	23.93	122	165	309	-	61	493	5,678
2	2,640	418	843	288	212	24.02	124	163	308	-	61	493	5,575
3	2,620	428	853	286	211	24.27	126	162	309	-	61	493	5,574
4	2,618	444	874	287	210	25.41	123	156	309	-	61	493	5,600
5	2,653	492	943	297	210	25.44	128	161	309	-	61	493	5,773
6	2,807	573	1,073	315	205	27.71	136	167	314	-	61	493	6,171
7	2,914	642	1,187	335	203	34.23	154	176	322	-	61	493	6,521
8	2,934	692	1,275	352	200	36.61	165	179	324	-	16	493	6,667
9	2,778	705	1,310	363	200	38.49	168	184	325	-	-	493	6,564
10	2,850	702	1,315	369	199	40.33	168	187	323	-	-	493	6,647
11	2,907	687	1,300	371	199	34.16	168	188	316	-	-	493	6,664
12	2,952	653	1,260	372	200	33.93	160	188	313	-	-	493	6,626
13	2,957	631	1,238	375	201	32.79	157	189	313	-	-	493	6,587
14	2,951	612	1,220	378	204	33.20	163	189	312	-	-	493	6,555
15	2,973	603	1,217	381	207	31.50	161	183	315	-	-	493	6,565
16	3,091	591	1,200	380	211	28.79	154	176	310	-	-	493	6,635
17	3,211	579	1,177	374	212	24.91	137	175	310	-	-	493	6,694
18	3,341	566	1,154	370	219	24.55	133	170	307	-	52	493	6,829
19	3,447	545	1,117	360	218	23.28	128	167	306	-	61	495	6,867
20	3,376	513	1,056	343	216	20.90	119	165	303	-	61	493	6,665
21	3,315	487	1,012	332	215	21.13	117	161	299	-	61	493	6,513
22	3,146	472	972	320	214	20.23	114	161	298	-	61	493	6,273
23	2,953	461	928	304	212	20.55	108	151	301	-	61	493	5,993
24	2,835	444	887	293	211	20.73	103	144	299	-	61	493	5,790

Winter 2020 System Peak Day: Residential End-Use Profiles (MW)

Hour	Cl. Wash	Refrig.	Misc	Lighting	Heating	Freezer	Dryer	Electric DHW	Cooker	Dish washer	Cooling	TV	Total
1	0.14	59	437	101	1,969	14.30	15.46	60	1.81	15.71	-	48	2,721
2	(0.00)	57	437	60	1,966	13.90	6.08	45	0.99	4.72	-	48	2,640
3	0.11	55	437	43	1,979	13.56	2.54	42	1.19	0.84	-	46	2,620
4	0.44	54	437	27	1,995	13.10	0.33	45	1.65	0.23	-	44	2,618
5	1.61	53	445	40	1,993	12.17	0.00	65	3.64	(0.00)	-	39	2,653
6	6.01	52	459	77	1,980	11.78	10.82	122	25.66	12.69	-	49	2,807
7	10.71	54	439	118	1,905	11.91	60.14	198	45.61	18.32	-	53	2,914
8	15.05	57	439	122	1,852	12.57	92.19	205	52.70	34.59	-	52	2,934
9	12.35	58	408	81	1,867	14.16	78.63	154	30.98	37.32	-	38	2,778
10	12.26	54	410	68	1,952	15.60	105.38	129	27.39	36.81	-	39	2,850
11	10.64	53	410	56	2,034	16.95	121.62	105	29.95	27.97	-	42	2,907
12	8.82	53	413	45	2,094	17.88	122.00	92	35.16	25.87	-	45	2,952
13	7.75	53	412	45	2,111	19.20	114.02	86	31.77	29.17	-	49	2,957
14	7.45	53	412	44	2,113	20.40	102.68	82	29.58	29.33	-	57	2,951
15	7.32	55	415	44	2,136	21.20	92.56	79	35.45	22.04	-	66	2,973
16	7.96	61	425	52	2,158	21.86	97.51	87	72.52	22.03	-	86	3,091
17	8.13	69	440	83	2,152	21.73	98.52	99	115.35	21.81	-	102	3,211
18	8.26	82	435	190	2,113	20.80	96.74	111	142.31	31.09	-	110	3,341
19	7.80	97	437	310	2,062	20.07	96.35	124	116.37	56.85	-	119	3,447
20	6.52	93	436	372	2,009	19.07	92.47	122	43.26	62.95	-	119	3,376
21	5.47	89	436	386	1,985	18.41	86.00	112	23.22	55.07	-	118	3,315
22	2.70	81	436	341	1,958	17.48	72.53	90	11.04	33.54	-	102	3,146
23	0.90	68	437	252	1,950	16.55	53.58	71	3.82	20.81	-	79	2,953
24	0.05	61	436	165	1,984	14.96	28.96	64	0.40	17.80	-	62	2,835

Winter 2020 System Peak Day: Commercial SGS End-Use Profiles (MW)

Hour	Refrig	Outdoor Light	Office	Misc	Indoor Light	Heating	Electric DHW	Electric Cook	Cooling	Vent	Total
1	1.63	18.14	15.50	47	87	166	20.72	2.13	-	68	426
2	1.55	18.14	15.49	45	86	161	20.66	2.13	-	68	418
3	1.52	18.14	15.44	45	85	172	20.64	1.93	-	68	428
4	1.54	18.14	15.40	50	84	185	20.64	1.47	-	68	444
5	1.67	18.13	15.53	76	85	205	21.03	1.97	-	68	492
6	1.95	16.97	15.68	120	84	243	21.17	2.53	-	68	573
7	2.15	11.59	15.93	168	89	262	21.43	3.01	-	68	642
8	2.46	2.25	16.35	217	94	266	21.25	3.54	-	68	692
9	2.89	-	16.72	243	96	252	21.94	3.74	-	68	705
10	3.19	-	16.83	252	97	239	22.25	3.82	-	68	702
11	3.26	-	16.91	256	97	220	22.51	3.86	-	69	687
12	3.28	-	16.95	257	97	184	22.44	3.85	-	69	653
13	3.35	-	17.00	259	98	159	22.58	3.91	-	69	631
14	3.38	-	17.17	258	99	140	22.68	3.93	-	69	612
15	3.41	-	17.30	252	100	135	22.93	3.88	-	68	603
16	3.36	-	17.53	242	102	130	23.29	3.76	-	68	591
17	3.20	0.85	17.63	228	102	131	23.73	3.66	-	68	579
18	3.05	13.96	17.21	200	101	136	24.05	3.38	-	68	566
19	2.81	16.52	16.89	170	101	143	23.77	3.10	-	69	545
20	2.62	17.52	16.40	141	96	146	23.11	2.80	-	68	513
21	2.42	18.08	16.11	113	95	149	22.63	2.69	-	68	487
22	2.12	18.14	15.96	90	93	160	21.04	2.58	-	68	472
23	1.92	18.14	15.73	71	89	174	20.64	2.37	-	68	461
24	1.73	18.14	15.55	55	87	176	20.81	2.15	-	68	444

Winter 2020 System Peak Day: Commercial LGS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Heating	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	-	4.14	29.83	92	151	232	39	43.14	98	167	856
2	-	4.14	29.47	86	149	230	39	43.14	97	165	843
3	-	3.75	29.35	100	148	228	39	43.14	97	165	853
4	-	2.85	29.35	115	150	232	39	43.14	97	165	874
5	-	3.83	31.65	138	162	259	40	43.13	99	167	943
6	-	4.91	36.38	186	186	304	40	40.35	102	174	1,073
7	-	5.85	43.38	207	223	354	41	27.61	105	180	1,187
8	-	6.89	47.42	213	257	408	42	5.42	109	186	1,275
9	-	7.26	52.48	197	270	436	43	-	114	190	1,310
10	-	7.42	53.33	180	273	447	44	-	118	193	1,315
11	-	7.50	53.77	157	273	451	44	-	119	195	1,300
12	-	7.48	54.13	112	274	454	44	-	119	195	1,260
13	-	7.60	54.79	82	276	459	44	-	120	195	1,238
14	-	7.64	54.59	58	279	461	45	-	121	194	1,220
15	-	7.55	55.02	53	281	461	45	-	121	194	1,217
16	-	7.32	55.63	46	280	454	45	-	120	192	1,200
17	-	7.12	56.40	49	272	438	46	2.09	118	189	1,177
18	-	6.57	56.41	54	252	406	44	33.46	116	185	1,154
19	-	6.04	53.93	63	242	371	43	39.47	113	184	1,117
20	-	5.45	50.41	68	221	336	42	41.74	111	180	1,056
21	-	5.23	46.88	73	213	305	41	42.99	108	177	1,012
22	-	5.02	38.00	87	199	280	41	43.13	104	174	972
23	-	4.60	32.70	105	171	258	40	43.14	102	172	928
24	-	4.18	30.34	108	153	240	40	43.14	99	169	887

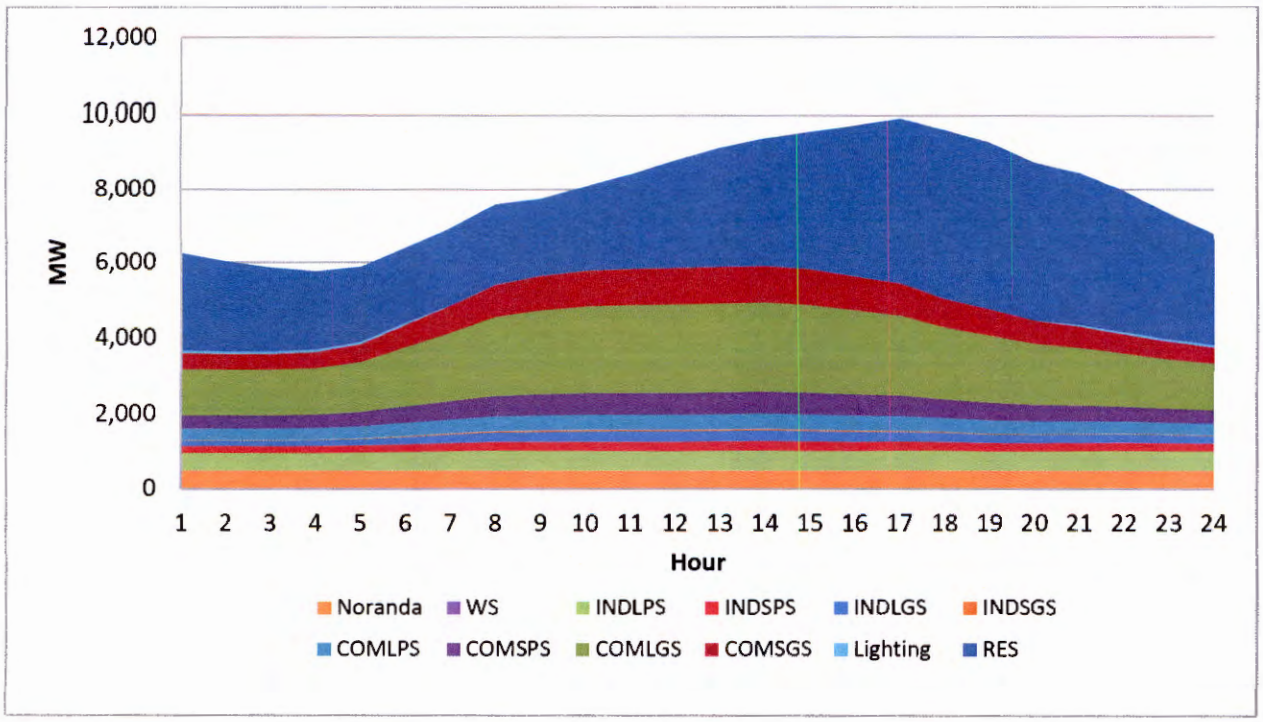
Winter 2020 System Peak Day: Commercial SPS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	-	0.71	14.15	54	109	17.03	15.06	23.09	56	289
2	-	0.71	14.10	54	109	17.02	15.06	23.02	55	288
3	-	0.64	14.09	53	108	16.96	15.06	23.00	55	286
4	-	0.49	14.09	54	108	16.91	15.06	23.01	55	287
5	-	0.66	14.38	58	113	17.00	15.06	23.13	56	297
6	-	0.84	14.54	65	121	17.05	14.09	23.37	59	315
7	-	1.00	14.81	78	129	17.19	9.62	23.57	62	335
8	-	1.18	14.75	89	140	17.52	1.87	23.88	64	352
9	-	1.24	15.28	93	145	17.86	-	24.26	66	363
10	-	1.27	15.49	94	148	17.96	-	24.52	68	369
11	-	1.28	15.67	94	149	18.04	-	24.56	69	371
12	-	1.28	15.63	94	150	18.07	-	24.57	69	372
13	-	1.30	15.73	95	151	18.13	-	24.62	69	375
14	-	1.31	15.79	96	153	18.32	-	24.65	68	378
15	-	1.29	15.96	97	155	18.48	-	24.67	68	381
16	-	1.25	16.22	97	155	18.78	-	24.63	67	380
17	-	1.22	16.51	94	152	18.96	0.71	24.49	66	374
18	-	1.12	16.73	87	146	18.57	11.59	24.33	64	370
19	-	1.03	16.51	84	138	18.27	13.72	24.13	64	360
20	-	0.93	16.02	77	130	17.80	14.55	23.90	62	343
21	-	0.89	15.65	74	124	17.54	15.01	23.71	61	332
22	-	0.86	14.47	70	119	17.43	15.06	23.49	59	320
23	-	0.79	14.13	61	115	17.23	15.06	23.32	58	304
24	-	0.72	14.21	55	111	17.07	15.06	23.17	57	293

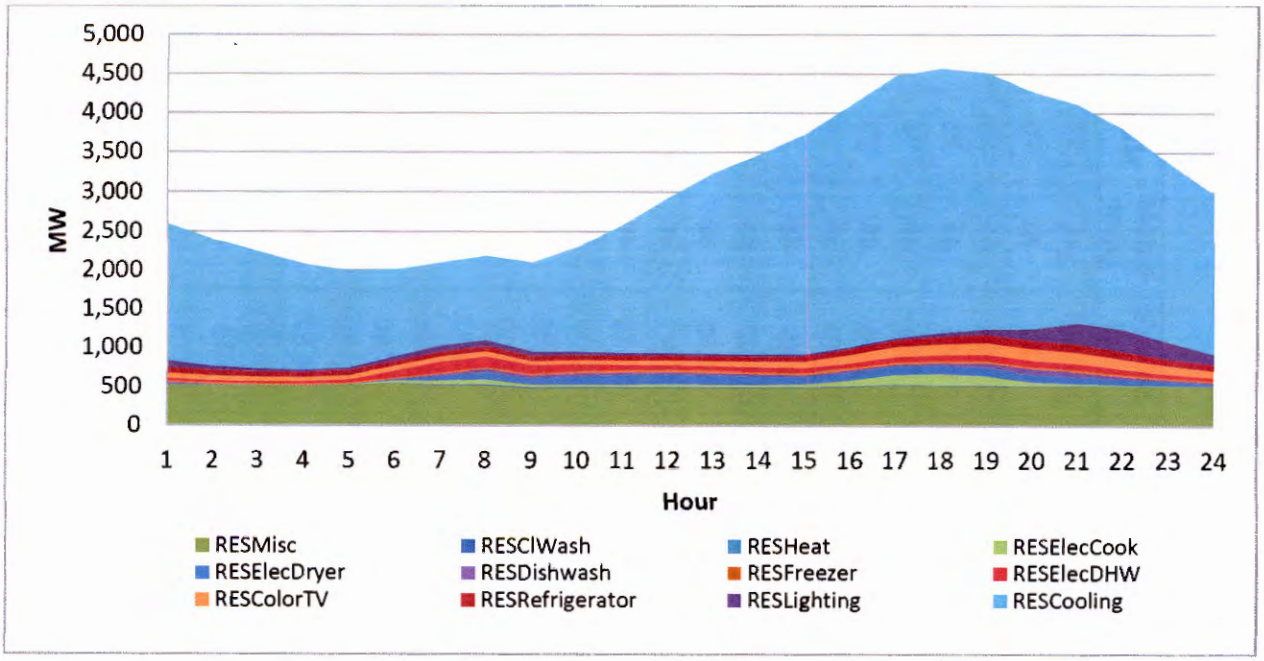
Winter 2020 System Peak Day: Commercial LPS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	-	0.53	9.88	46	75	9.69	9.36	8.32	54	212
2	-	0.53	9.86	46	75	9.68	9.36	8.30	54	212
3	-	0.48	9.85	45	74	9.65	9.36	8.29	54	211
4	-	0.37	9.85	44	73	9.64	9.36	8.29	54	210
5	-	0.49	9.99	45	74	9.78	9.36	8.34	54	210
6	-	0.63	9.94	43	73	10.00	8.76	8.42	51	205
7	-	0.75	9.89	46	73	10.29	5.98	8.50	49	203
8	-	0.88	9.69	48	74	10.69	1.16	8.61	47	200
9	-	0.93	9.92	49	75	10.98	-	8.75	45	200
10	-	0.95	10.05	49	75	11.08	-	8.85	44	199
11	-	0.96	10.17	49	76	11.14	-	8.86	43	199
12	-	0.96	10.13	49	76	11.17	-	8.86	43	200
13	-	0.98	10.19	50	77	11.20	-	8.88	43	201
14	-	0.98	10.24	50	79	11.30	-	8.89	43	204
15	-	0.97	10.36	51	81	11.36	-	8.90	44	207
16	-	0.94	10.53	52	82	11.46	-	8.89	44	211
17	-	0.91	10.73	52	82	11.46	0.44	8.84	45	212
18	-	0.84	10.90	52	81	11.12	7.21	8.78	47	219
19	-	0.77	10.82	52	79	10.85	8.53	8.70	48	218
20	-	0.70	10.57	50	78	10.48	9.04	8.62	49	216
21	-	0.67	10.42	49	77	10.24	9.33	8.55	50	215
22	-	0.64	9.83	49	76	10.09	9.36	8.47	51	214
23	-	0.59	9.76	47	75	9.90	9.36	8.40	52	212
24	-	0.54	9.91	46	75	9.74	9.36	8.35	53	211

Load Profiles for Summer 2030 System Peak Day (MW)



Summer 2030 System Peak Day: Residential End-Use Profiles (MW)



Summer 2030 System Peak Day: Commercial SGS End-Use Profiles (MW)

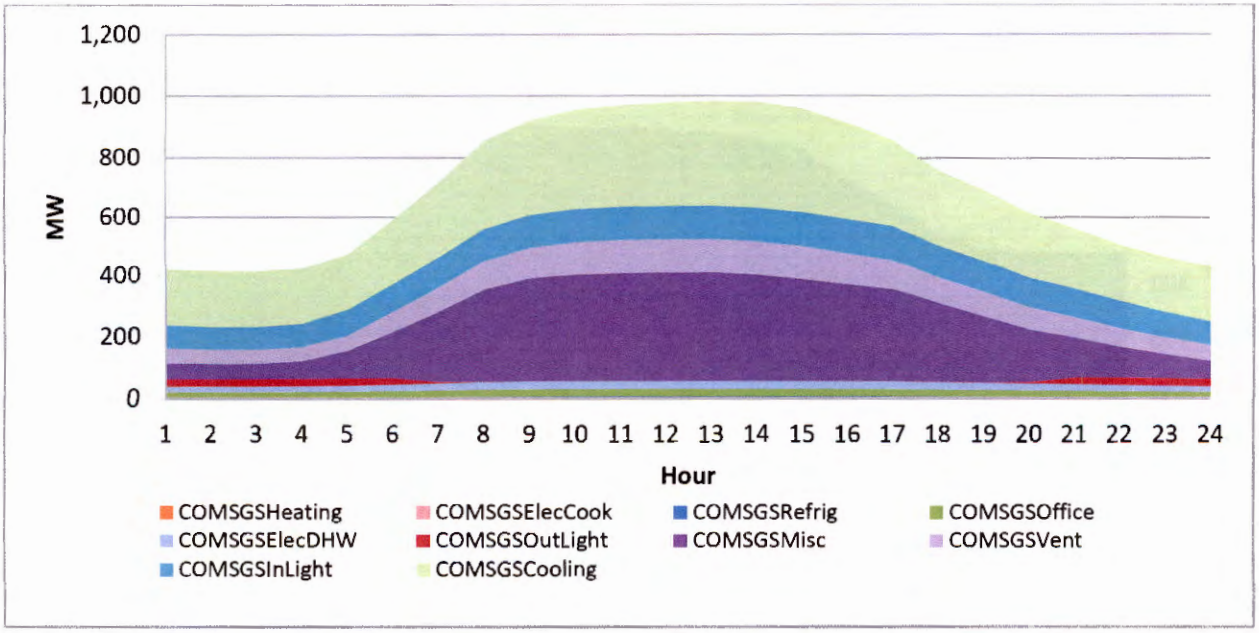
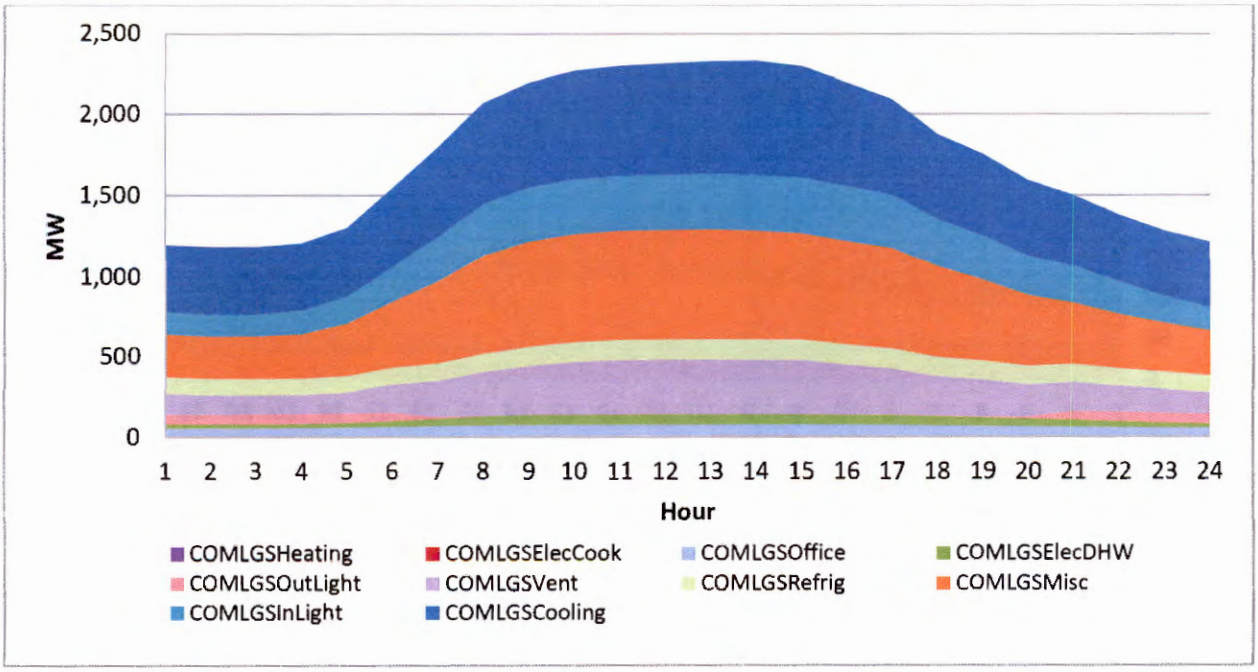
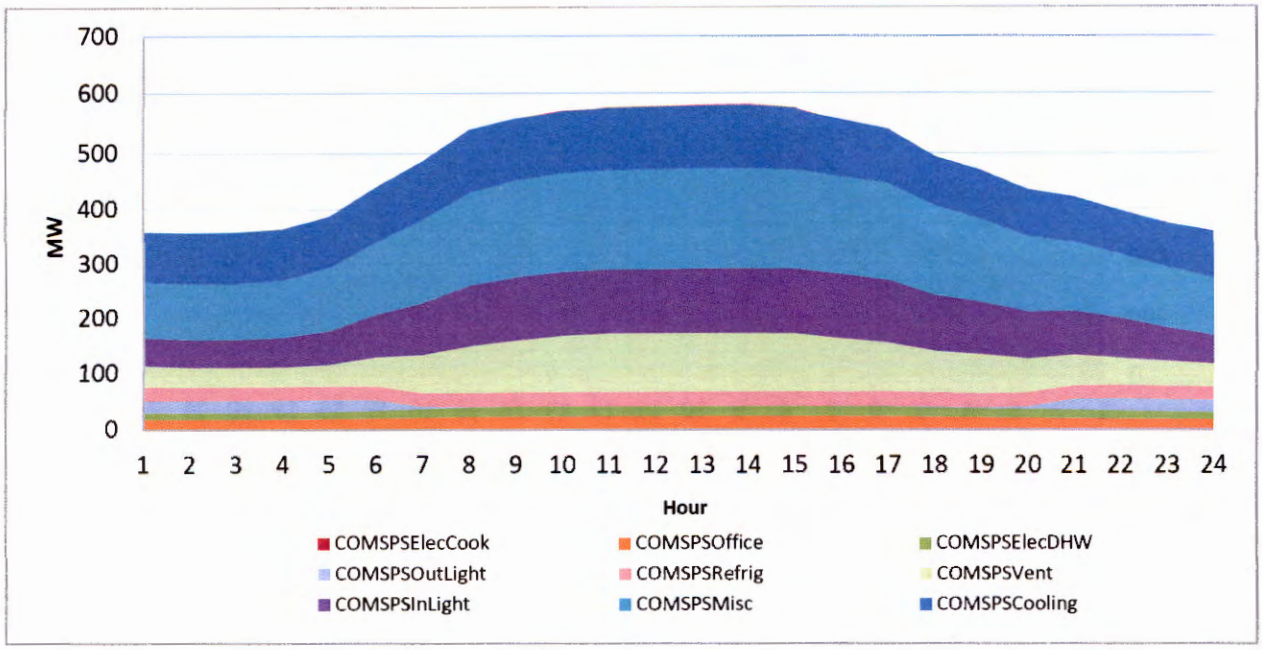


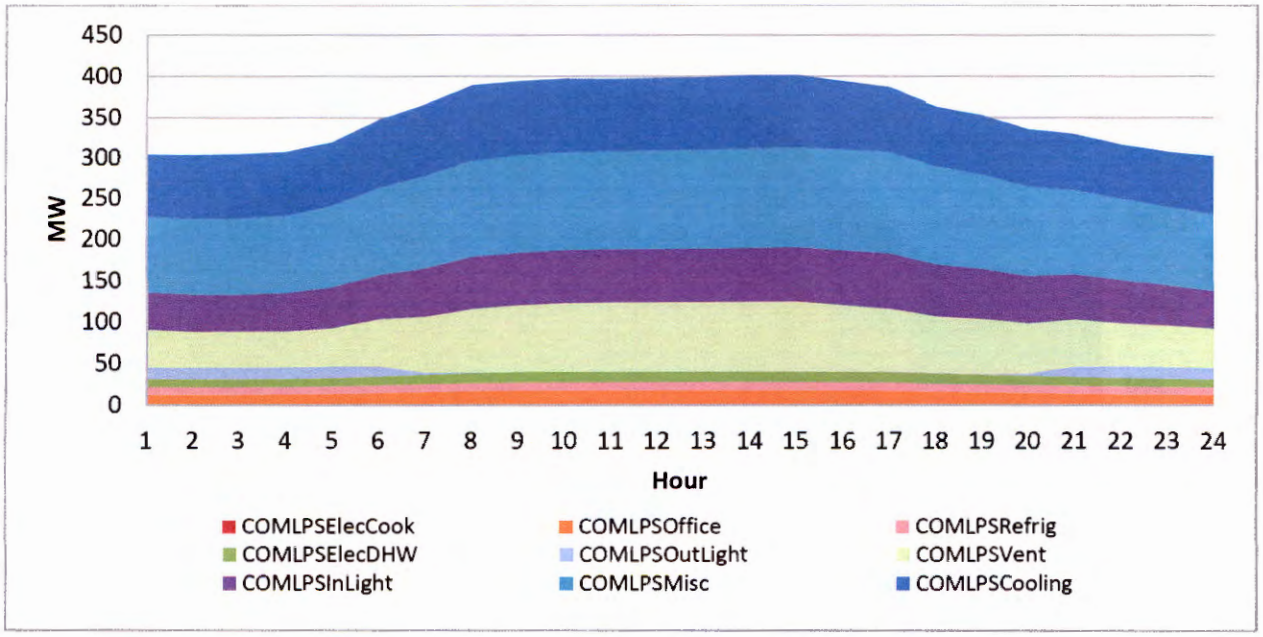
Figure Summer 2030 System Peak Day: Commercial LGS End-Use Profiles (MW)



Summer 2030 System Peak Day: Commercial SPS End-Use Profiles (MW)



Summer 2030 System Peak Day: Commercial LPS End-Use Profiles (MW)



Load Profiles for Summer 2030 System Peak Day (MW)

Hour	RES	COM SGS	COM LGS	COM SPS	COM LPS	IND SGS	IND LGS	IND SPS	IND LPS	WS	Lighting	Noranda	Total
1	2,600	424	1,199	379	304	12.47	124	197	400	-	59	491	6,190
2	2,396	418	1,187	377	304	12.33	125	197	403	-	59	491	5,970
3	2,233	417	1,188	378	305	11.93	127	196	399	-	59	491	5,806
4	2,079	427	1,208	384	308	12.46	132	197	402	-	59	491	5,700
5	1,994	475	1,302	409	320	14.81	146	202	413	-	59	491	5,826
6	2,008	593	1,548	466	347	21.51	171	214	426	-	52	491	6,338
7	2,095	718	1,794	518	366	26.34	197	229	442	-	-	491	6,877
8	2,184	857	2,072	576	390	32.12	216	242	460	-	-	491	7,520
9	2,098	922	2,198	599	395	39.84	227	249	454	-	-	491	7,673
10	2,293	957	2,271	612	398	40.00	238	254	452	-	-	491	8,004
11	2,582	972	2,299	616	397	37.88	241	259	449	-	-	491	8,344
12	2,930	981	2,316	618	398	36.01	241	261	446	-	-	491	8,717
13	3,244	986	2,328	619	399	36.11	239	264	455	-	-	491	9,062
14	3,476	983	2,331	620	402	36.05	247	266	461	-	-	491	9,314
15	3,732	961	2,298	616	402	34.62	234	266	452	-	-	491	9,486
16	4,211	937	2,258	613	405	33.42	234	267	460	-	-	505	9,922
17	4,418	848	2,065	571	382	25.42	217	252	448	-	-	491	9,717
18	4,573	759	1,876	528	364	21.73	211	246	459	-	-	491	9,528
19	4,521	694	1,753	501	353	17.34	193	243	437	-	-	491	9,204
20	4,275	616	1,593	463	335	14.34	194	239	438	-	-	491	8,661
21	4,111	565	1,502	446	330	12.91	195	238	444	-	38	491	8,374
22	3,803	509	1,382	419	317	13.50	195	238	450	-	59	491	7,878
23	3,377	468	1,284	396	308	12.90	188	235	444	-	59	491	7,262
24	2,982	435	1,215	380	302	15.07	170	229	440	-	59	491	6,720

Summer 2030 System Peak Day: Residential End-Use Profiles (MW)

Hour	Cl. Wash	Refrig.	Misc	Lighting	Heating	Freezer	Dryer	Electric DHW	Cooker	Dish washer	Cooling	TV	Total
1	0.14	72	520	88	1.28	17.61	16.09	42	1.88	16.42	1,765	59	2,600
2	(0.00)	70	520	49	1.25	17.12	6.33	32	1.03	4.93	1,636	59	2,396
3	0.12	68	519	35	1.21	16.71	2.64	30	1.24	0.88	1,501	57	2,233
4	0.46	67	519	21	1.17	16.14	0.34	32	1.71	0.24	1,366	54	2,079
5	1.66	66	529	32	1.14	14.99	0.00	46	3.78	(0.00)	1,250	49	1,994
6	6.16	65	546	59	-	14.50	11.27	87	26.65	13.26	1,120	60	2,008
7	10.98	67	521	77	1.14	14.67	62.60	141	47.38	19.14	1,068	66	2,095
8	15.43	71	522	78	1.20	15.49	95.96	145	54.75	36.14	1,085	64	2,184
9	12.66	72	484	56	1.27	17.45	81.84	109	32.19	38.99	1,146	47	2,098
10	12.57	67	487	46	1.37	19.21	109.69	92	28.46	38.46	1,343	48	2,293
11	10.91	67	487	36	1.51	20.88	126.59	75	31.11	29.22	1,645	52	2,582
12	9.04	66	491	31	1.62	22.02	126.99	66	36.53	27.02	1,997	55	2,930
13	7.94	66	490	31	1.74	23.66	118.68	61	33.00	30.48	2,320	60	3,244
14	7.63	68	490	29	1.83	25.13	106.87	58	30.73	30.64	2,558	70	3,476
15	7.50	71	493	26	1.87	26.11	96.34	56	36.83	23.03	2,813	82	3,732
16	8.38	80	519	27	1.84	27.66	104.26	64	77.39	23.65	3,169	109	4,211
17	8.34	88	523	28	1.65	26.76	102.54	70	119.84	22.79	3,301	125	4,418
18	8.47	103	517	48	1.64	25.62	100.69	79	147.84	32.48	3,373	136	4,573
19	7.96	114	517	68	1.64	24.64	99.93	88	120.47	59.19	3,274	147	4,521
20	6.69	110	518	149	1.60	23.49	96.24	87	44.95	65.77	3,025	147	4,275
21	5.61	106	518	269	1.53	22.68	89.51	80	24.13	57.53	2,791	146	4,111
22	2.77	102	518	287	1.48	21.53	75.49	64	11.47	35.04	2,559	126	3,803
23	0.92	87	519	219	1.43	20.39	55.77	50	3.97	21.74	2,299	98	3,377
24	0.05	78	518	135	1.36	18.43	30.14	46	0.41	18.60	2,059	77	2,982

Summer 2030 System Peak Day: Commercial SGS End-Use Profiles (MW)

Hour	Refrig	Outdoor Light	Office	Misc	Indoor Light	Heating	Electric DHW	Electric Cook	Cooling	Vent	Total
1	1.59	24.09	17.65	51	75	0.08	17.69	1.72	186	49	424
2	1.51	24.09	17.62	49	75	0.08	17.64	1.72	185	46	418
3	1.48	24.09	17.80	49	75	0.08	17.63	1.87	184	46	417
4	1.50	24.09	18.06	56	78	0.08	17.63	2.17	183	46	427
5	1.63	24.04	18.74	89	84	0.09	18.25	2.58	186	50	475
6	1.90	21.09	19.85	151	92	-	19.80	3.03	219	65	593
7	2.10	4.42	21.12	228	102	0.11	22.09	3.45	255	80	718
8	2.40	0.77	22.45	301	109	0.11	24.01	3.94	296	96	857
9	2.82	-	23.06	337	111	0.11	25.09	4.13	314	104	922
10	3.12	-	23.21	350	112	0.10	24.95	4.21	329	111	957
11	3.20	-	23.30	355	112	0.10	24.77	4.24	336	114	972
12	3.22	-	23.37	357	112	0.08	25.03	4.20	342	114	981
13	3.30	-	23.43	357	113	0.07	25.10	4.24	346	114	986
14	3.32	-	23.50	349	113	0.06	24.92	4.24	350	114	983
15	3.36	-	23.42	334	114	0.06	24.84	4.27	343	114	961
16	3.40	-	23.82	326	119	0.06	25.37	4.27	326	109	937
17	3.15	0.42	22.57	297	115	0.06	24.46	3.95	285	97	848
18	3.00	1.06	21.59	258	110	0.06	24.00	3.64	253	85	759
19	2.75	1.13	20.85	215	105	0.09	23.06	3.32	241	81	694
20	2.57	4.55	20.03	172	99	0.10	22.13	2.95	221	72	616
21	2.36	21.01	19.33	132	95	0.10	21.33	2.63	206	66	565
22	2.07	24.02	18.55	102	90	0.11	19.97	2.42	191	59	509
23	1.87	24.09	18.12	78	82	0.12	18.63	2.16	186	56	468
24	1.68	24.09	17.75	59	77	0.12	17.77	1.79	185	52	435

Summer 2030 System Peak Day: Commercial LGS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Heating	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	418	3.59	27	0.04	140	269	48	61.55	102	128	1,199
2	422	3.59	27	0.04	138	266	48	61.55	101	119	1,187
3	421	3.90	27	0.05	139	268	49	61.55	101	119	1,188
4	419	4.52	27	0.05	147	280	49	61.55	101	119	1,208
5	422	5.38	29	0.06	171	329	51	61.40	103	130	1,302
6	483	6.32	36	-	219	414	55	53.88	107	175	1,548
7	547	7.20	48	0.09	271	518	58	11.30	109	224	1,794
8	622	8.23	57	0.09	319	611	62	1.98	114	276	2,072
9	648	8.63	64	0.09	333	656	64	-	120	305	2,198
10	672	8.78	64	0.08	337	671	65	-	124	330	2,271
11	679	8.84	63	0.07	337	678	65	-	125	343	2,299
12	690	8.77	64	0.05	338	681	65	-	126	343	2,316
13	696	8.84	65	0.04	341	683	65	-	127	343	2,328
14	704	8.84	64	0.03	343	676	66	-	127	342	2,331
15	690	8.90	63	0.03	341	660	65	-	128	341	2,298
16	659	8.90	64	0.02	347	660	66	-	131	322	2,258
17	580	8.25	62	0.02	325	618	63	1.10	125	283	2,065
18	521	7.60	60	0.03	291	567	60	2.73	123	244	1,876
19	501	6.92	56	0.04	271	508	58	2.89	119	231	1,753
20	464	6.15	51	0.05	242	444	55	11.64	116	201	1,593
21	438	5.48	47	0.05	227	384	53	53.68	113	180	1,502
22	411	5.05	38	0.06	205	341	51	61.37	109	160	1,382
23	405	4.51	31	0.07	168	308	50	61.55	106	150	1,284
24	408	3.73	28	0.07	144	281	48	61.55	104	136	1,215

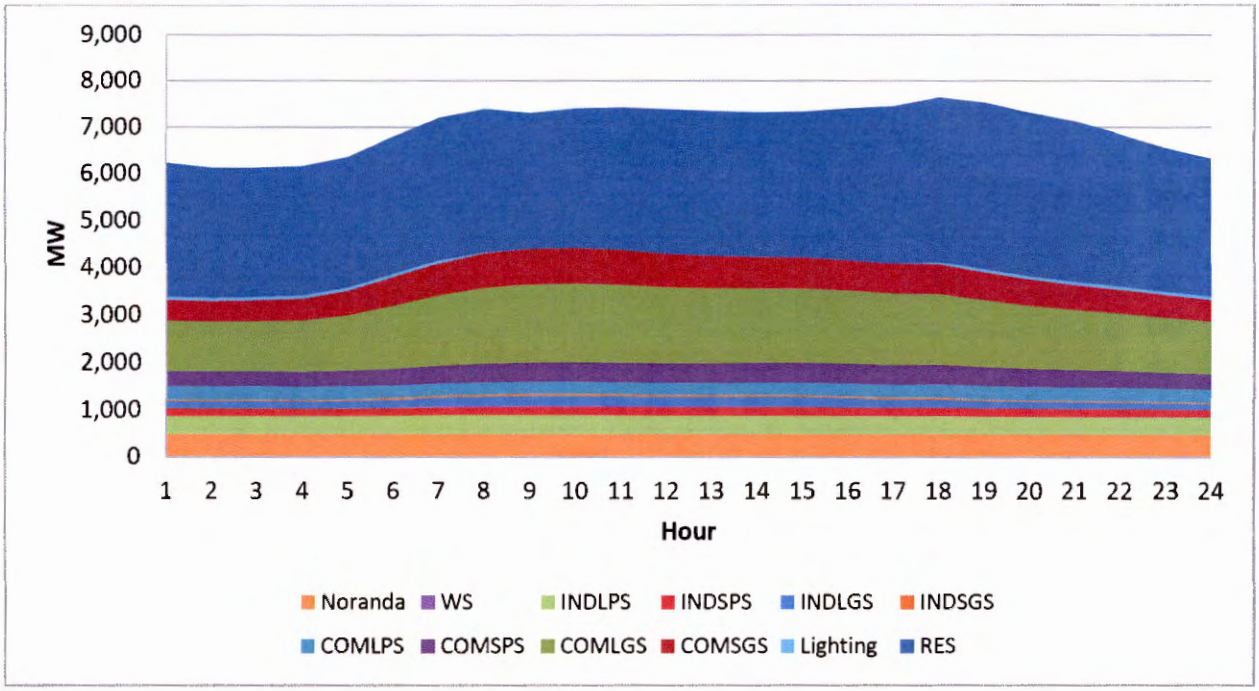
Summer 2030 System Peak Day: Commercial SPS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	92	0.59	12.37	48	122	19.87	20.50	23.03	41	379
2	95	0.59	12.33	47	121	19.85	20.50	22.97	38	377
3	95	0.64	12.32	48	122	20.04	20.50	22.95	38	378
4	94	0.74	12.32	50	125	20.33	20.50	22.96	38	384
5	94	0.88	12.78	58	138	21.02	20.45	23.07	41	409
6	101	1.03	13.92	73	158	22.11	17.94	23.32	57	466
7	106	1.18	15.63	90	181	23.34	3.76	23.51	73	518
8	112	1.34	17.06	105	201	24.66	0.65	23.81	91	576
9	110	1.41	17.88	110	210	25.25	-	24.28	101	599
10	109	1.43	17.79	111	213	25.38	-	24.54	110	612
11	107	1.44	17.66	111	214	25.48	-	24.69	114	616
12	107	1.43	17.85	111	215	25.54	-	24.71	114	618
13	107	1.44	17.91	112	216	25.60	-	24.80	114	619
14	108	1.44	17.77	113	215	25.70	-	24.82	114	620
15	107	1.45	17.71	112	213	25.65	-	24.88	114	616
16	104	1.45	18.08	114	217	26.15	-	25.52	107	613
17	95	1.35	17.43	107	206	24.87	0.35	24.66	94	571
18	89	1.24	17.10	97	195	23.88	0.90	24.49	80	528
19	88	1.13	16.40	90	181	23.13	0.96	24.19	76	501
20	85	1.00	15.71	81	165	22.29	3.87	23.94	66	463
21	83	0.89	15.11	76	150	21.56	17.87	23.76	59	446
22	80	0.82	14.07	69	139	20.76	20.43	23.43	52	419
23	81	0.74	13.06	57	131	20.34	20.50	23.27	48	396
24	86	0.61	12.43	49	125	19.97	20.50	23.11	44	380

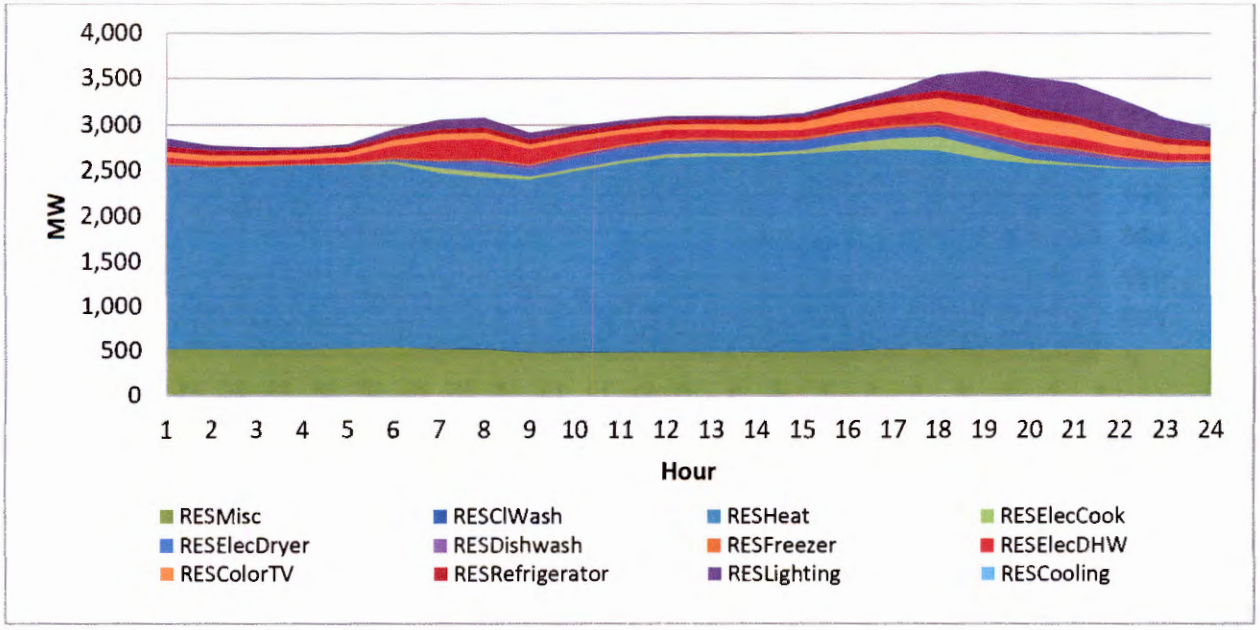
Summer 2030 System Peak Day: Commercial LPS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	77	0.49	9.52	45	92	12.44	14.02	9.13	45	304
2	79	0.49	9.50	45	92	12.42	14.02	9.11	43	304
3	79	0.53	9.50	45	92	12.54	14.02	9.10	43	305
4	79	0.61	9.50	46	94	12.75	14.02	9.11	43	308
5	78	0.73	9.79	50	99	13.29	13.99	9.15	46	320
6	84	0.85	10.49	54	106	14.26	12.27	9.25	56	347
7	88	0.97	11.51	59	113	15.37	2.57	9.33	66	366
8	93	1.11	12.36	63	118	16.53	0.45	9.45	76	390
9	92	1.16	12.80	64	119	17.07	-	9.64	79	395
10	91	1.18	12.72	64	120	17.21	-	9.74	82	398
11	89	1.19	12.64	64	120	17.29	-	9.80	83	397
12	89	1.18	12.75	64	121	17.35	-	9.81	83	398
13	89	1.19	12.78	65	121	17.40	-	9.85	83	399
14	90	1.19	12.70	65	122	17.42	-	9.86	83	402
15	89	1.20	12.66	66	123	17.34	-	9.88	84	402
16	87	1.20	12.94	69	127	17.55	-	10.14	81	405
17	79	1.11	12.49	66	123	16.53	0.24	9.79	74	382
18	74	1.02	12.28	64	120	15.72	0.62	9.72	67	364
19	73	0.93	11.85	61	115	15.10	0.66	9.60	65	353
20	71	0.83	11.43	58	108	14.43	2.65	9.50	60	335
21	69	0.74	11.08	55	102	13.84	12.23	9.43	55	330
22	67	0.68	10.53	53	98	13.22	13.98	9.29	51	317
23	68	0.61	9.95	49	95	12.84	14.02	9.23	49	308
24	72	0.50	9.55	45	93	12.52	14.02	9.16	46	302

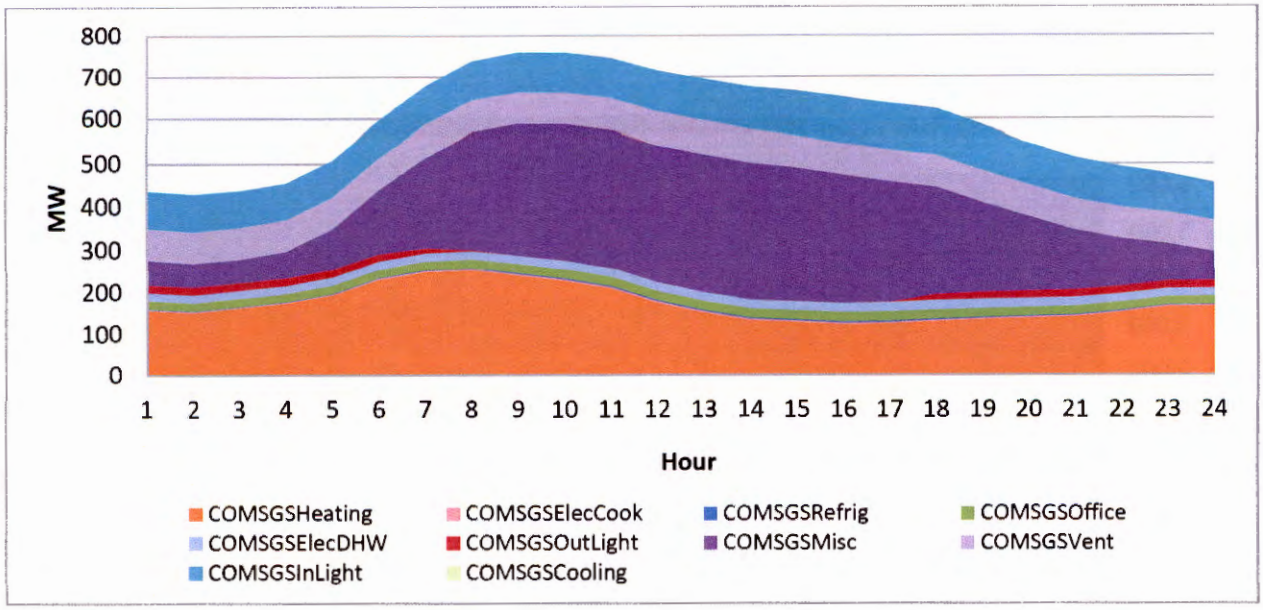
Load Profiles for Winter 2030 System Peak Day (MW)



Winter 2030 System Peak Day: Residential End-Use Profiles (MW)



Winter 2030 System Peak Day: Commercial SGS End-Use Profiles (MW)



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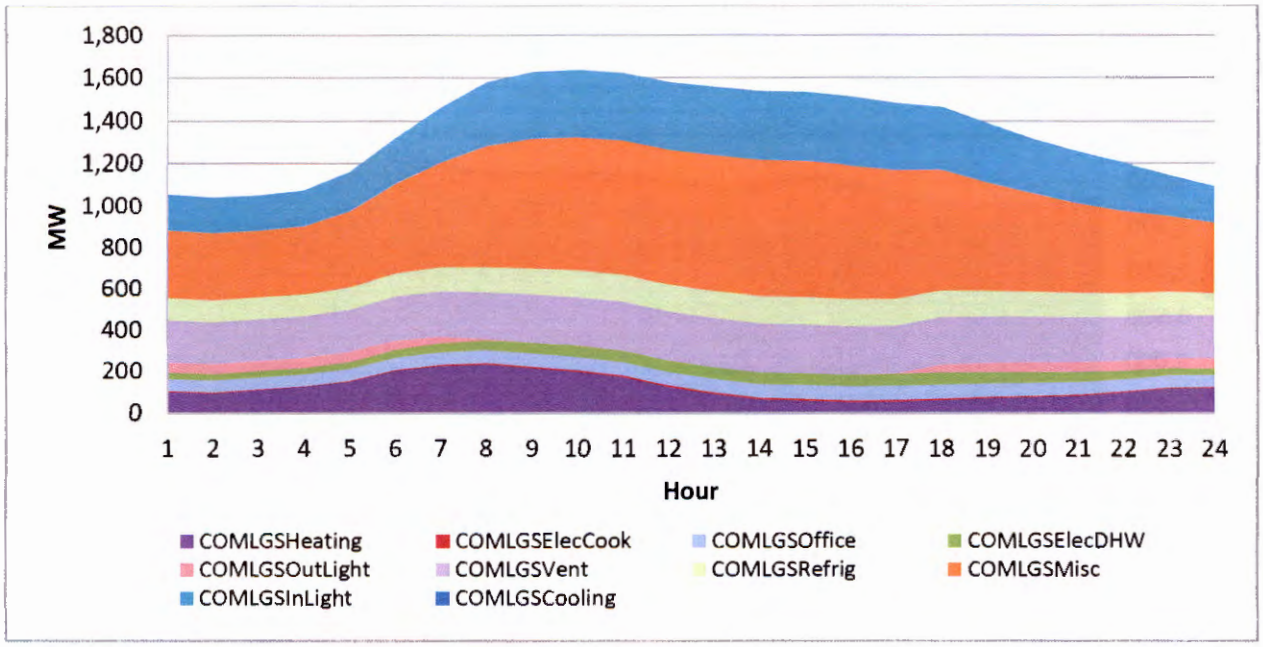

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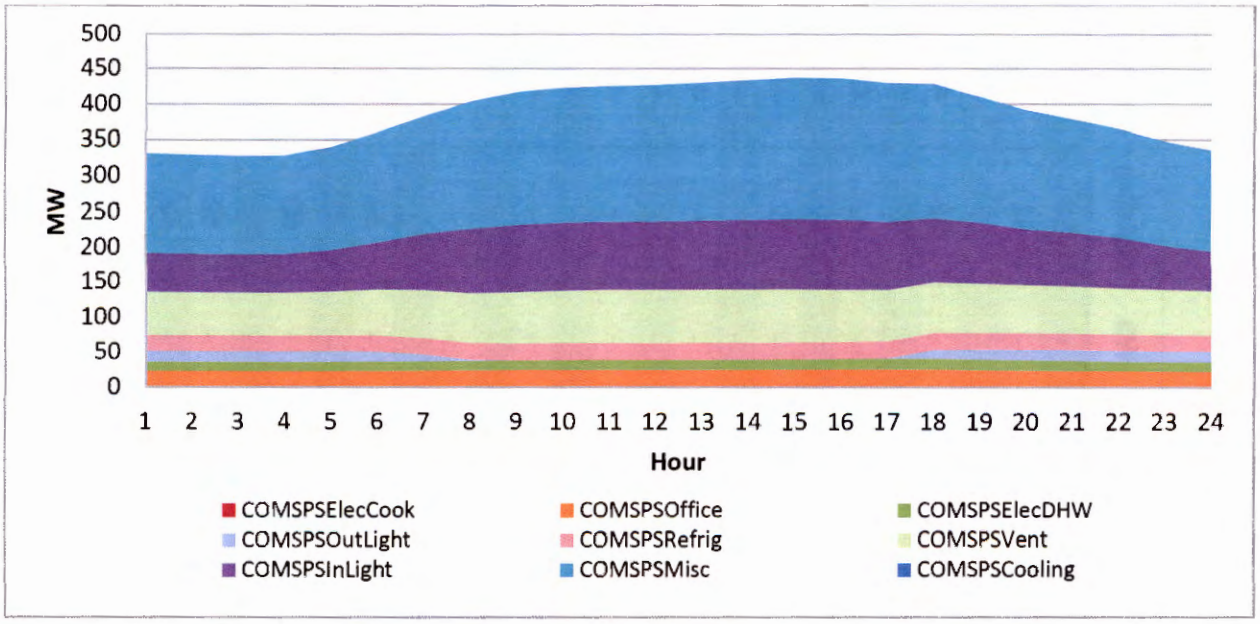
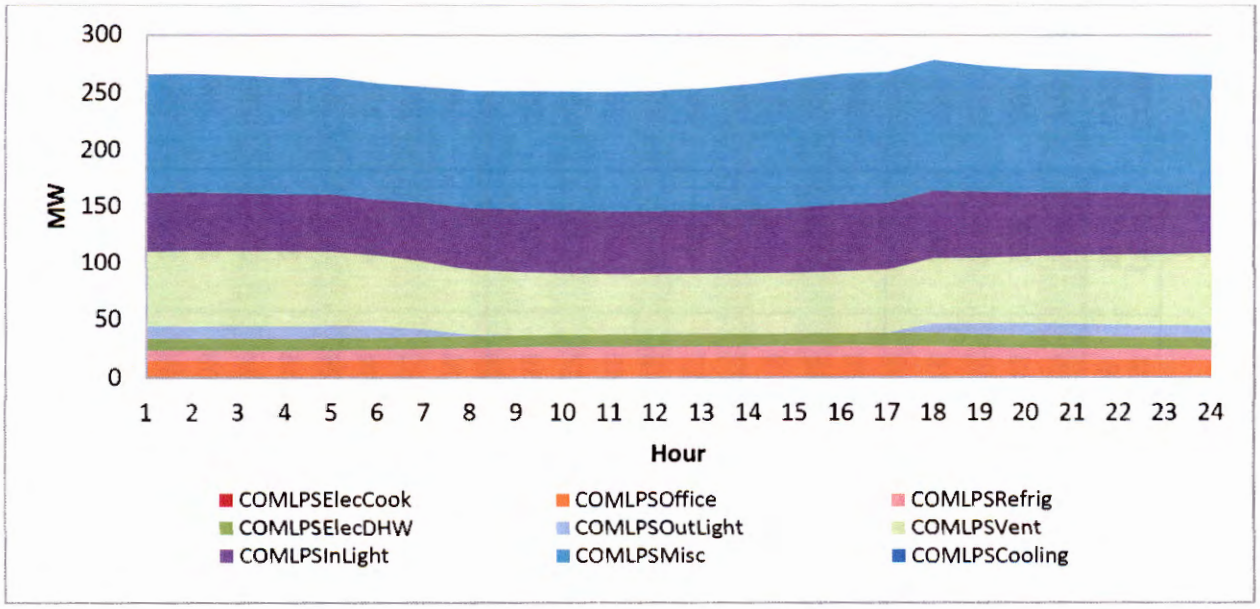


Winter 2030 System Peak Day: Commercial LPS End-Use Profiles (MW)



Load Profiles for Winter 2030 System Peak Day (MW)

Hour	RES	COM SGS	COM LGS	COM SPS	COM LPS	IND SGS	IND LGS	IND SPS	IND LPS	WS	Lighting	Noranda	Total
1	2,855	438	1,058	331	266	25.20	130	177	336	-	62	493	6,171
2	2,777	430	1,043	329	267	25.29	133	174	335	-	62	493	6,067
3	2,758	439	1,052	328	265	25.56	134	173	336	-	62	493	6,066
4	2,758	456	1,076	328	263	26.76	132	167	335	-	62	493	6,098
5	2,794	509	1,162	340	264	26.79	137	172	336	-	62	493	6,295
6	2,954	598	1,320	360	258	29.18	145	178	341	-	62	493	6,740
7	3,062	678	1,463	383	255	36.04	165	188	350	-	62	493	7,135
8	3,083	740	1,579	404	252	38.55	176	191	352	-	12	493	7,321
9	2,917	760	1,627	417	252	40.53	180	197	353	-	-	493	7,235
10	2,992	760	1,637	423	252	42.47	179	200	351	-	-	493	7,329
11	3,051	747	1,622	425	251	35.97	180	200	344	-	-	493	7,351
12	3,099	715	1,580	427	252	35.73	171	201	340	-	-	493	7,315
13	3,104	695	1,557	430	254	34.53	168	202	340	-	-	493	7,278
14	3,100	676	1,539	434	258	34.96	174	201	339	-	-	493	7,249
15	3,124	667	1,535	437	262	33.17	172	196	342	-	-	493	7,261
16	3,250	652	1,514	436	267	30.32	165	188	337	-	-	493	7,333
17	3,376	636	1,483	430	268	26.23	146	187	337	-	-	493	7,383
18	3,497	617	1,448	423	275	25.85	142	181	333	-	46	493	7,483
19	3,669	601	1,425	420	280	25.04	140	182	339	-	63	506	7,650
20	3,512	549	1,315	392	271	22.01	127	176	329	-	62	493	7,248
21	3,446	516	1,256	379	270	22.25	125	172	325	-	62	493	7,066
22	3,274	495	1,203	365	269	21.30	122	172	324	-	62	493	6,802
23	3,082	479	1,147	348	266	21.64	115	161	327	-	62	493	6,501
24	2,967	457	1,095	335	266	21.83	110	153	325	-	62	493	6,285

Winter 2030 System Peak Day: Residential End-Use Profiles (MW)

Hour	Cl. Wash	Refrig.	Misc	Lighting	Heating	Freezer	Dryer	Electric DHW	Cooker	Dish washer	Cooling	TV	Total
1	0.14	60	518	90	2,015	14.58	15.99	65	1.87	16.37	-	59	2,855
2	(0.00)	58	518	54	2,012	14.17	6.29	49	1.02	4.92	-	59	2,777
3	0.12	56	518	38	2,025	13.83	2.62	46	1.23	0.88	-	56	2,758
4	0.45	55	518	24	2,042	13.36	0.34	49	1.70	0.24	-	54	2,758
5	1.65	54	528	35	2,040	12.41	0.00	71	3.76	(0.00)	-	48	2,794
6	6.13	53	545	69	2,027	12.01	11.20	132	26.52	13.22	-	60	2,954
7	10.92	55	520	106	1,949	12.14	62.22	215	47.14	19.08	-	66	3,062
8	15.34	58	521	109	1,895	12.82	95.38	222	54.47	36.03	-	64	3,083
9	12.59	58	483	72	1,910	14.44	81.35	167	32.02	38.87	-	46	2,917
10	12.49	55	486	61	1,998	15.91	109.03	140	28.31	38.35	-	48	2,992
11	10.85	54	486	50	2,081	17.29	125.83	114	30.95	29.13	-	52	3,051
12	8.99	54	490	40	2,143	18.23	126.23	100	36.34	26.94	-	55	3,099
13	7.89	53	489	40	2,161	19.59	117.97	93	32.83	30.39	-	60	3,104
14	7.59	54	489	40	2,162	20.80	106.23	89	30.57	30.55	-	70	3,100
15	7.46	56	492	39	2,186	21.62	95.77	85	36.64	22.96	-	81	3,124
16	8.11	61	504	46	2,208	22.29	100.89	95	74.95	22.95	-	106	3,250
17	8.29	70	522	75	2,202	22.16	101.93	108	119.22	22.72	-	125	3,376
18	8.42	84	516	170	2,162	21.21	100.09	121	147.07	32.38	-	136	3,497
19	8.11	100	529	283	2,155	20.91	101.81	137	122.83	60.48	-	150	3,669
20	6.65	94	517	333	2,056	19.45	95.67	133	44.71	65.57	-	147	3,512
21	5.58	90	517	346	2,032	18.77	88.98	122	24.00	57.36	-	145	3,446
22	2.76	83	517	305	2,004	17.83	75.04	98	11.41	34.94	-	126	3,274
23	0.92	69	518	226	1,996	16.88	55.44	77	3.95	21.68	-	97	3,082
24	0.05	62	517	147	2,030	15.26	29.96	70	0.41	18.54	-	76	2,967

Winter 2030 System Peak Day: Commercial SGS End-Use Profiles (MW)

Hour	Refrig	Outdoor Light	Office	Misc	Indoor Light	Heating	Electric DHW	Electric Cook	Cooling	Vent	Total
1	1.58	18.35	19.80	59	88	158	18.92	2.07	-	73	438
2	1.50	18.35	19.79	56	87	153	18.87	2.07	-	73	430
3	1.47	18.35	19.73	56	86	163	18.85	1.88	-	73	439
4	1.48	18.35	19.68	63	85	175	18.85	1.42	-	73	456
5	1.62	18.34	19.85	94	86	194	19.21	1.91	-	73	509
6	1.88	17.16	20.04	149	85	231	19.33	2.46	-	73	598
7	2.08	11.72	20.36	209	90	249	19.57	2.93	-	74	678
8	2.38	2.28	20.89	270	95	253	19.41	3.44	-	74	740
9	2.79	-	21.36	301	97	240	20.04	3.63	-	74	760
10	3.08	-	21.50	312	98	227	20.32	3.71	-	74	760
11	3.15	-	21.61	317	98	209	20.55	3.75	-	74	747
12	3.16	-	21.65	320	98	175	20.49	3.74	-	74	715
13	3.24	-	21.72	322	99	151	20.62	3.80	-	74	695
14	3.26	-	21.93	320	100	133	20.71	3.82	-	74	676
15	3.30	-	22.10	313	102	128	20.94	3.77	-	74	667
16	3.25	-	22.40	301	104	123	21.27	3.66	-	74	652
17	3.09	0.86	22.53	283	103	125	21.67	3.56	-	74	636
18	2.95	14.12	21.99	248	102	129	21.96	3.28	-	74	617
19	2.77	17.07	22.03	216	104	138	22.17	3.08	-	76	601
20	2.53	17.72	20.95	175	97	138	21.10	2.72	-	74	549
21	2.33	18.28	20.59	140	96	142	20.66	2.61	-	73	516
22	2.05	18.34	20.39	112	95	152	19.21	2.51	-	73	495
23	1.85	18.35	20.10	88	90	166	18.85	2.30	-	73	479
24	1.67	18.35	19.87	68	88	167	19.00	2.09	-	73	457

Winter 2030 System Peak Day: Commercial LGS End-Use Profiles (MW)

Hour	Cooling	Electric Cook	Electric DHW	Heating	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	-	4.58	31	101	174	328	57	49.70	108	205	1,058
2	-	4.58	31	94	172	325	57	49.70	107	203	1,043
3	-	4.15	31	109	170	322	57	49.70	106	203	1,052
4	-	3.15	31	126	173	328	57	49.70	107	203	1,076
5	-	4.24	33	150	187	366	58	49.69	109	205	1,162
6	-	5.44	38	202	214	430	59	46.49	112	213	1,320
7	-	6.48	45	226	257	500	60	31.81	115	221	1,463
8	-	7.62	49	233	296	577	62	6.24	120	228	1,579
9	-	8.04	55	214	311	617	63	-	126	233	1,627
10	-	8.21	55	197	314	632	64	-	130	237	1,637
11	-	8.30	56	171	315	638	64	-	131	239	1,622
12	-	8.28	56	123	316	643	64	-	131	239	1,580
13	-	8.41	57	89	318	649	64	-	132	239	1,557
14	-	8.45	57	63	322	652	65	-	133	239	1,539
15	-	8.36	57	58	323	651	65	-	133	238	1,535
16	-	8.10	58	50	322	642	66	-	132	235	1,514
17	-	7.88	59	53	313	620	66	2.41	130	232	1,483
18	-	7.27	59	59	290	574	65	38.55	128	228	1,448
19	-	6.82	57	70	285	536	65	46.45	127	231	1,425
20	-	6.03	52	74	255	476	61	48.09	122	221	1,315
21	-	5.79	49	79	245	431	60	49.54	119	218	1,256
22	-	5.55	40	95	229	396	59	49.69	115	214	1,203
23	-	5.09	34	115	197	365	58	49.70	112	211	1,147
24	-	4.63	32	118	177	339	58	49.70	109	208	1,095

Winter 2030 System Peak Day: Commercial SPS End-Use Profiles (MW)

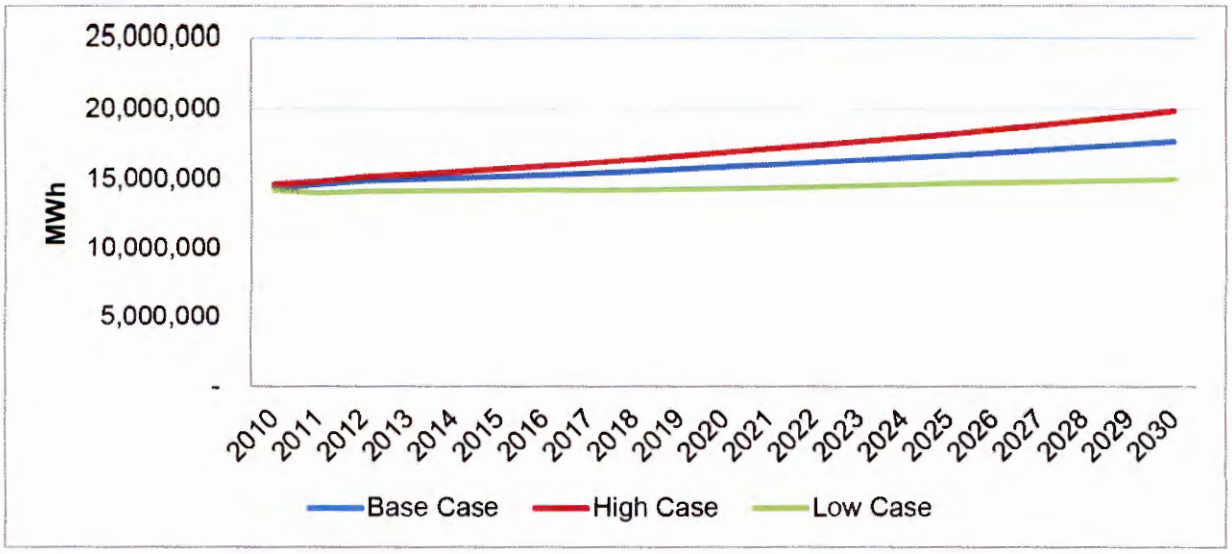
Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	-	0.70	13.22	56	139	22.25	15.58	22.82	62	331
2	-	0.70	13.18	55	138	22.24	15.58	22.75	61	329
3	-	0.64	13.16	55	137	22.17	15.58	22.73	61	328
4	-	0.48	13.16	55	137	22.10	15.58	22.74	61	328
5	-	0.65	13.43	60	144	22.22	15.58	22.86	62	340
6	-	0.84	13.58	67	153	22.28	14.57	23.10	65	360
7	-	1.00	13.83	80	164	22.47	9.96	23.30	68	383
8	-	1.17	13.77	92	178	22.90	1.94	23.60	71	404
9	-	1.24	14.27	96	185	23.35	-	23.97	73	417
10	-	1.26	14.47	97	187	23.48	-	24.23	75	423
11	-	1.28	14.64	97	189	23.58	-	24.27	76	425
12	-	1.27	14.60	98	190	23.62	-	24.28	76	427
13	-	1.29	14.70	98	192	23.69	-	24.33	76	430
14	-	1.30	14.75	100	195	23.95	-	24.36	75	434
15	-	1.28	14.91	100	197	24.16	-	24.38	75	437
16	-	1.24	15.15	100	197	24.54	-	24.34	74	436
17	-	1.21	15.43	97	194	24.78	0.73	24.21	73	430
18	-	1.12	15.62	90	185	24.27	12.00	24.04	71	423
19	-	1.05	15.75	89	179	24.39	14.49	24.36	72	420
20	-	0.93	14.97	80	165	23.26	15.05	23.62	68	392
21	-	0.89	14.62	77	157	22.93	15.53	23.43	67	379
22	-	0.85	13.52	72	151	22.78	15.58	23.21	65	365
23	-	0.78	13.20	63	146	22.52	15.58	23.05	64	348
24	-	0.71	13.28	57	141	22.31	15.58	22.90	63	335

Winter 2030 System Peak Day: Commercial LPS End-Use Profiles (MW)

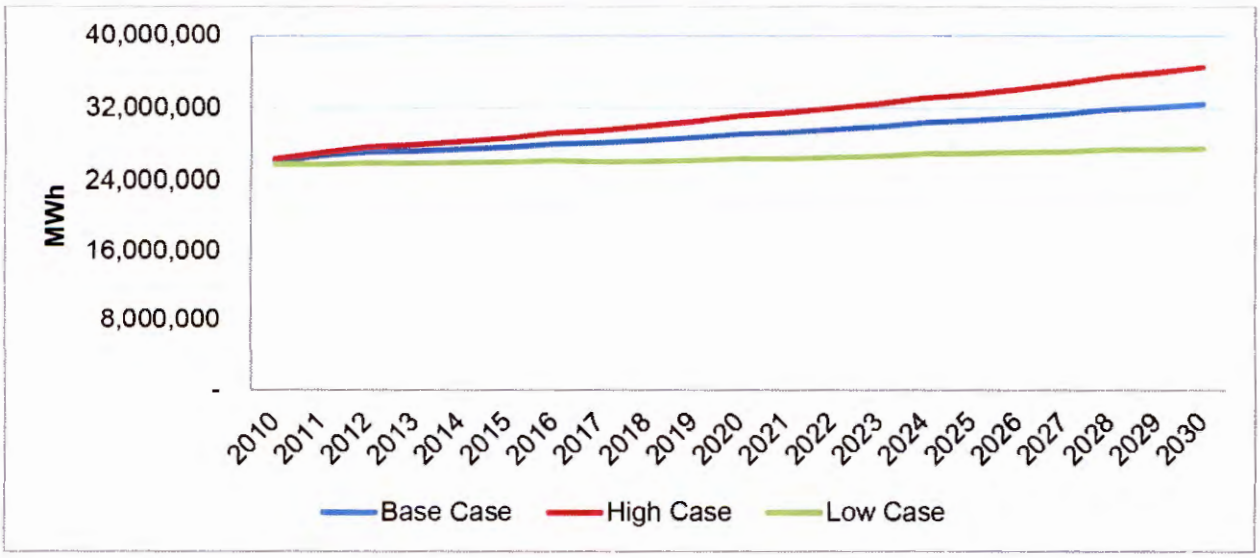
Hour	Cooling	Electric Cook	Electric DHW	Indoor Light	Misc	Office	Outdoor Light	Refrig	Vent	Total
1	-	0.58	10.17	52	104	13.95	10.67	9.06	65	266
2	-	0.58	10.14	52	104	13.94	10.67	9.03	66	267
3	-	0.53	10.14	51	104	13.90	10.67	9.02	66	265
4	-	0.40	10.14	51	103	13.88	10.67	9.03	66	263
5	-	0.54	10.28	51	103	14.08	10.67	9.07	65	264
6	-	0.69	10.23	49	102	14.39	9.98	9.17	62	258
7	-	0.82	10.18	52	102	14.82	6.82	9.25	59	255
8	-	0.97	9.97	55	104	15.38	1.33	9.37	57	252
9	-	1.02	10.20	56	105	15.81	-	9.52	55	252
10	-	1.04	10.34	56	105	15.94	-	9.63	53	252
11	-	1.05	10.47	56	106	16.03	-	9.65	52	251
12	-	1.05	10.42	56	106	16.07	-	9.65	52	252
13	-	1.07	10.48	57	108	16.12	-	9.67	52	254
14	-	1.07	10.54	57	110	16.26	-	9.68	53	258
15	-	1.06	10.66	58	113	16.36	-	9.69	53	262
16	-	1.03	10.83	60	115	16.50	-	9.68	54	267
17	-	1.00	11.04	60	115	16.50	0.50	9.62	55	268
18	-	0.92	11.21	59	113	16.00	8.21	9.55	57	275
19	-	0.87	11.37	60	113	15.95	9.92	9.68	59	280
20	-	0.77	10.88	57	108	15.08	10.30	9.38	59	271
21	-	0.73	10.72	56	107	14.74	10.63	9.30	61	270
22	-	0.70	10.11	55	107	14.52	10.67	9.21	62	269
23	-	0.65	10.04	53	105	14.25	10.67	9.15	63	266
24	-	0.59	10.20	52	105	14.01	10.67	9.09	64	266

Energy Forecast for High-Low-Base* Case Scenarios[24]

High-Low-Base Case Energy Usage Forecast for Summer Months (MWh)



High-Low-Base Case Energy Usage Forecast for Non-summer Months (MWh)



[24] 4 CSR 240-22.030(8)(D), 4 CSR 240-22.030(8)(D)1, 4 CSR 240-22.030(8)(D)3

* "High" scenario refers to "High Load Low Gas Carbon Mandates" scenario, "Low" scenario refers to "Low Load Low Gas Cap and Trade Carbon Policy" scenario and "Base" case refers to weighted average of all the 10 load scenarios considered for IRP 2011. "Base" case is also referred to as "Planning Case"

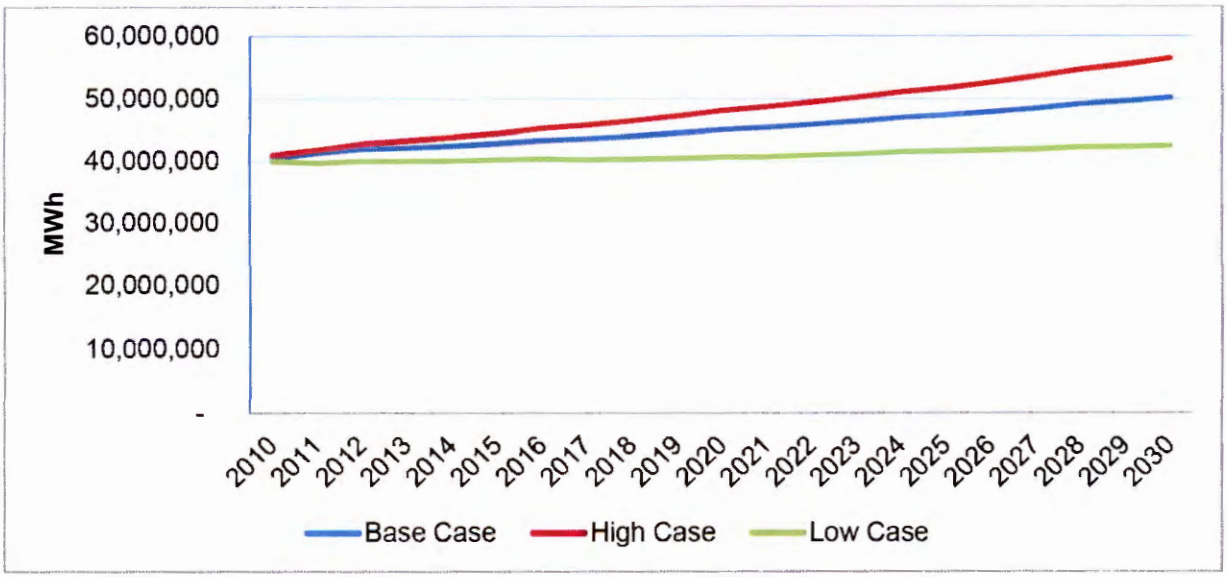
High-Low-Base Case Energy Usage Forecast for Summer Months (MWh)

Year	Base Case	High Case	Low Case
2010	14,426,916	14,644,969	14,211,395
2011	14,648,071	14,839,079	14,021,808
2012	14,878,299	15,180,468	14,145,656
2013	14,975,558	15,358,749	14,171,032
2014	15,062,543	15,527,256	14,184,731
2015	15,180,837	15,732,174	14,222,663
2016	15,300,587	15,953,411	14,226,666
2017	15,418,335	16,172,345	14,223,724
2018	15,557,984	16,415,558	14,242,041
2019	15,726,650	16,689,063	14,289,170
2020	15,874,046	16,937,854	14,320,992
2021	16,035,636	17,195,088	14,380,772
2022	16,201,219	17,448,054	14,453,937
2023	16,372,662	17,707,283	14,532,573
2024	16,550,000	17,973,569	14,615,856
2025	16,725,267	18,236,350	14,698,677
2026	16,913,950	18,547,131	14,749,166
2027	17,109,744	18,873,018	14,797,971
2028	17,313,047	19,203,485	14,858,003
2029	17,515,892	19,531,921	14,919,875
2030	17,722,011	19,867,732	14,981,072

High-Low-Base Case Energy Usage Forecast for Non-summer Months (MWh)

Year	Base Case	High Case	Low Case
2010	26,088,084	26,348,180	25,764,132
2011	26,696,940	27,025,113	25,709,708
2012	27,087,866	27,660,196	25,888,397
2013	27,192,804	27,924,404	25,852,162
2014	27,396,293	28,282,297	25,915,631
2015	27,638,145	28,686,183	26,006,998
2016	28,006,800	29,248,885	26,158,991
2017	28,121,248	29,550,642	26,050,801
2018	28,385,045	30,008,715	26,087,546
2019	28,698,462	30,518,985	26,174,033
2020	29,114,109	31,134,740	26,361,648
2021	29,295,822	31,493,251	26,357,178
2022	29,611,291	31,974,227	26,498,868
2023	29,938,112	32,467,157	26,651,457
2024	30,406,212	33,113,940	26,930,789
2025	30,610,581	33,474,523	26,972,999
2026	30,965,639	34,052,820	27,077,576
2027	31,334,966	34,666,734	27,172,628
2028	31,851,432	35,437,284	27,404,856
2029	32,091,741	35,900,021	27,398,690
2030	32,475,596	36,527,108	27,513,296

High-Low-Base Case Annual Energy Forecast (MWh)

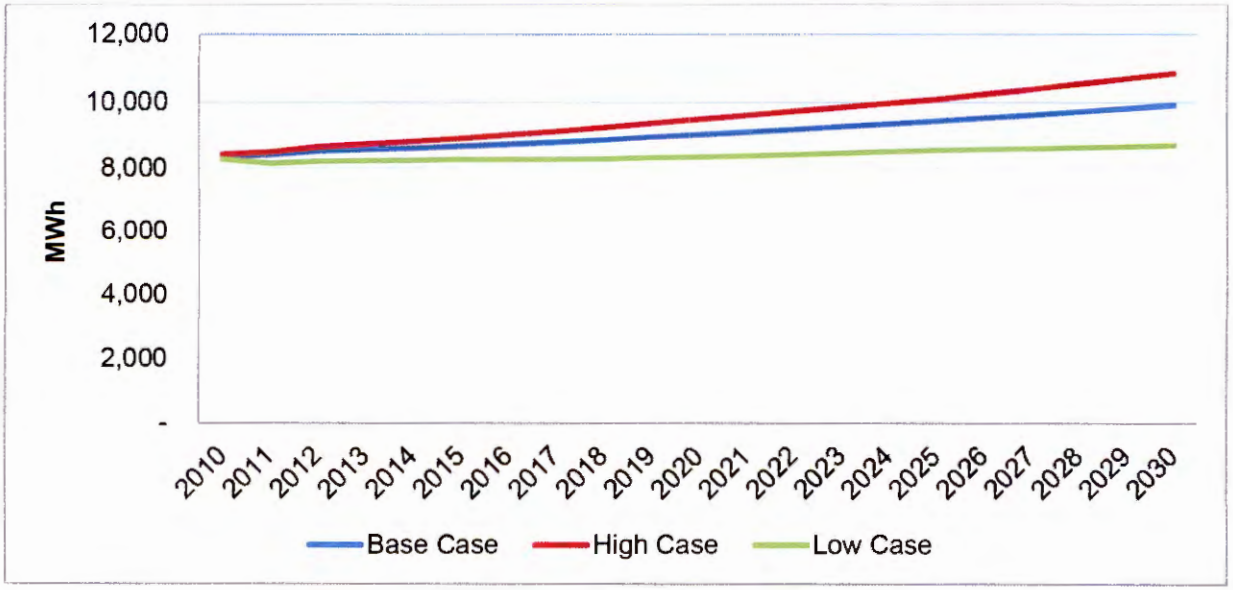


High-Low-Base Case Annual Energy Forecast (MWh)

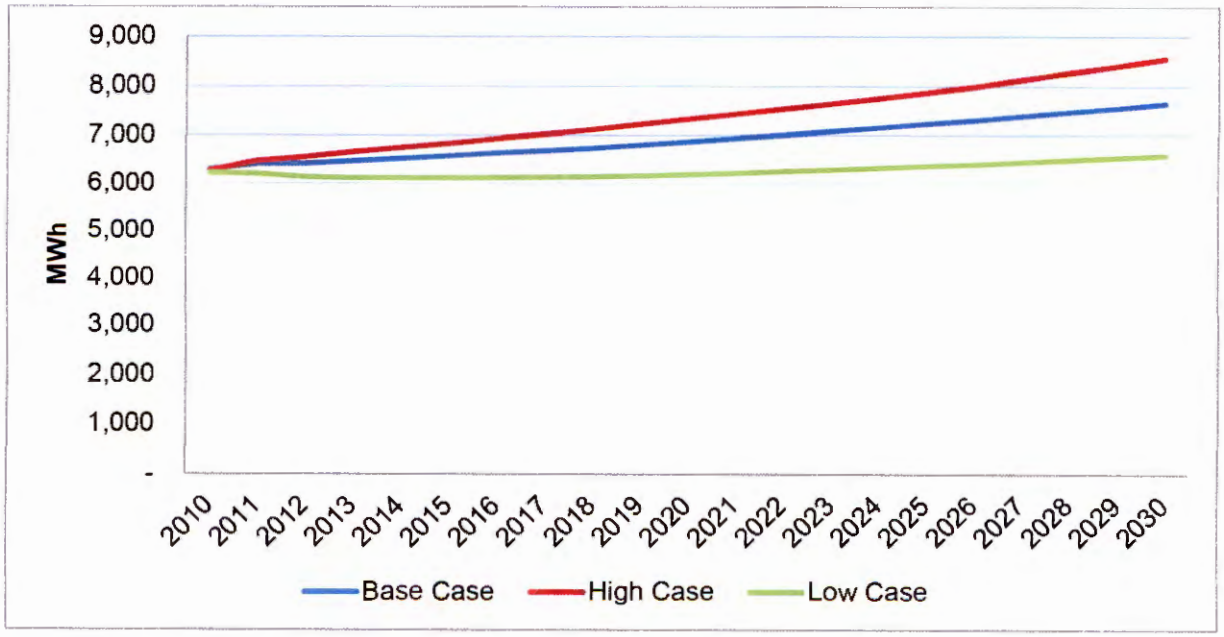
Year	Base Case	High Case	Low Case
2010	40,515,000	40,993,149	39,975,527
2011	41,345,011	41,864,192	39,731,516
2012	41,966,165	42,840,664	40,034,054
2013	42,168,362	43,283,152	40,023,195
2014	42,458,836	43,809,552	40,100,362
2015	42,818,982	44,418,356	40,229,661
2016	43,307,387	45,202,296	40,385,658
2017	43,539,583	45,722,987	40,274,526
2018	43,943,030	46,424,272	40,329,587
2019	44,425,112	47,208,048	40,463,203
2020	44,988,155	48,072,594	40,682,639
2021	45,331,457	48,688,339	40,737,950
2022	45,812,510	49,422,281	40,952,805
2023	46,310,774	50,174,440	41,184,030
2024	46,956,213	51,087,509	41,546,645
2025	47,335,848	51,710,873	41,671,677
2026	47,879,589	52,599,951	41,826,742
2027	48,444,711	53,539,752	41,970,600
2028	49,164,479	54,640,768	42,262,859
2029	49,607,633	55,431,942	42,318,565
2030	50,197,607	56,394,840	42,494,368

Peak Demand Forecasts for Base, High and Low Case Scenarios[25]

High-Low-Base Case Peak Demand Forecast for Summer Months (MWh)



High-Low-Base Case Peak Demand Forecast for Winter Months (MWh)



[25] 4 CSR 240-22.030(8)(D), 4 CSR 240-22.030(8)(D)2, 4 CSR 240-22.030(8)(D)3

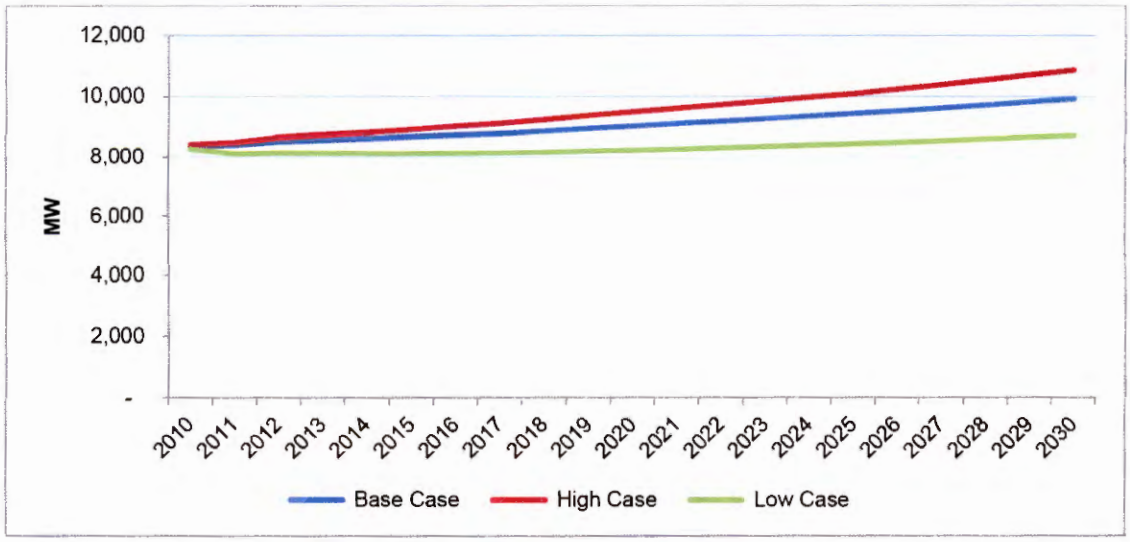
High-Low-Base Case Peak Demand Forecast for Summer Months (MWh)

Year	Base Case	High Case	Low Case
2010	8,359	8,422	8,267
2011	8,407	8,493	8,141
2012	8,512	8,648	8,200
2013	8,568	8,739	8,224
2014	8,610	8,817	8,236
2015	8,668	8,911	8,261
2016	8,727	9,016	8,266
2017	8,785	9,118	8,266
2018	8,855	9,235	8,278
2019	8,943	9,368	8,310
2020	9,018	9,488	8,331
2021	9,098	9,611	8,365
2022	9,180	9,729	8,408
2023	9,264	9,850	8,454
2024	9,351	9,974	8,501
2025	9,436	10,093	8,547
2026	9,526	10,240	8,572
2027	9,621	10,396	8,596
2028	9,720	10,555	8,627
2029	9,820	10,714	8,659
2030	9,922	10,876	8,693

High-Low-Base Case Peak Demand Forecast for Winter Months (MWh)

Year	Base Case	High Case	Low Case
2010	6,299	6,274	6,271
2011	6,408	6,474	6,253
2012	6,416	6,552	6,210
2013	6,470	6,659	6,215
2014	6,519	6,745	6,232
2015	6,572	6,832	6,254
2016	6,630	6,930	6,271
2017	6,679	7,022	6,269
2018	6,733	7,117	6,273
2019	6,799	7,226	6,289
2020	6,867	7,334	6,308
2021	6,935	7,442	6,333
2022	7,006	7,547	6,369
2023	7,080	7,656	6,407
2024	7,156	7,767	6,447
2025	7,232	7,877	6,486
2026	7,311	8,000	6,515
2027	7,393	8,136	6,536
2028	7,478	8,274	6,561
2029	7,562	8,411	6,588
2030	7,650	8,551	6,617

High-Low-Base Case Annual Peak Demand Forecast (MW)



High-Low-Base Case Annual Peak Demand Forecast (MW)

Forecast Year	Base Case	High Case	Low Case
2010	8,359	8,422	8,267
2011	8,407	8,493	8,141
2012	8,512	8,648	8,200
2013	8,568	8,739	8,224
2014	8,610	8,817	8,236
2015	8,668	8,911	8,261
2016	8,727	9,016	8,266
2017	8,785	9,118	8,266
2018	8,855	9,235	8,278
2019	8,943	9,368	8,310
2020	9,018	9,488	8,331
2021	9,098	9,611	8,365
2022	9,180	9,729	8,408
2023	9,264	9,850	8,454
2024	9,351	9,974	8,501
2025	9,436	10,093	8,547
2026	9,526	10,240	8,572
2027	9,621	10,396	8,596
2028	9,720	10,555	8,627
2029	9,820	10,714	8,659
2030	9,922	10,876	8,693

Weather Normalized Energy Models[26]

Residential Weather Normalization Energy Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	13,499,246	5,221,382	2.59	0.01
DOWBinary.Monday	-1,965,123	289,863	-6.78	0.00
DOWBinary.Tuesday	-2,573,703	287,207	-8.96	0.00
DOWBinary.Wednesday	-2,860,960	288,462	-9.92	0.00
DOWBinary.Thursday	-2,716,200	287,734	-9.44	0.00
DOWBinary.Friday	-2,645,223	286,656	-9.23	0.00
DOWBinary.Saturday	-936,684	286,105	-3.27	0.00
MonthBinary.Jan	-1,338,235	424,742	-3.15	0.00
MonthBinary.Feb	-2,636,115	417,754	-6.31	0.00
MonthBinary.Mar	30,315,547	4,937,964	6.14	0.00
MonthBinary.Apr	28,478,848	4,989,421	5.71	0.00
MonthBinary.May	-9,787,240	799,791	-12.24	0.00
MonthBinary.Jun	-7,310,802	886,980	-8.24	0.00
MonthBinary.Jul	-6,369,651	892,530	-7.14	0.00
MonthBinary.Aug	-6,021,118	882,856	-6.82	0.00
MonthBinary.Sep	-9,088,752	842,922	-10.78	0.00
MonthBinary.Oct	-8,902,141	684,824	-13.00	0.00
MonthBinary.Nov	29,862,488	4,932,516	6.05	0.00
ResSplines.AvgT	352,687	82,847	4.26	0.00
ResSplines.ColdAvgT	-1,182,591	87,463	-13.52	0.00
ResSplines.CoolAvgT	-906,832	93,770	-9.67	0.00
ResSplines.WarmAvgT	1,122,334	95,253	11.78	0.00
ResSplines.HotAvgT	1,898,509	153,287	12.39	0.00
ResSplines.ColdDummy	63,270,590	5,269,609	12.01	0.00
ResSplines.CoolDummy	53,907,905	5,683,764	9.49	0.00
ResSplines.WarmDummy	-76,902,468	6,326,127	-12.16	0.00
ResSplines.HotDummy	-139,443,505	11,970,213	-11.65	0.00
ResSplines.ShoulderAvgT	-606,711	75,540	-8.03	0.00
ResSplines.ShoulderColdAvgT	767,140	148,679	5.16	0.00
ResSplines.ShoulderCoolAvgT	516,386	96,522	5.35	0.00
ResSplines.ShoulderColdDummy	-40,683,652	6,523,759	-6.24	0.00
ResSplines.ShoulderCoolDummy	-32,233,064	5,807,133	-5.55	0.00

[26] 4 CSR 240-22.030(1)(C)2.C.; 4 CSR 240-22.030(2)(B)

Residential Weather Normalization Energy Models Statistics

Model Statistic	Value of the Statistic
Deg. of Freedom for Error	667
R-Squared	0.964
Adjusted R-Squared	0.963
F-Statistic	580
Prob (F-Statistic)	0.000
Mean Abs. % Err. (MAPE)	0.041
Durbin-Watson Statistic	1.253

Commercial SGS Weather Normalization Energy Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	5,876,655	722,875	8.13	0.00
DOWBinary.TWT	1,261,667	180,873	6.98	0.00
DOWBinary.MonFri	1,120,138	181,150	6.18	0.00
DOWBinary.Saturday	560,481	55,188	10.16	0.00
MonthBinary.Feb	-143,261	67,269	-2.13	0.03
MonthBinary.Mar	386,287	240,475	1.61	0.11
MonthBinary.Apr	433,698	259,331	1.67	0.09
MonthBinary.May	-1,032,096	140,853	-7.33	0.00
MonthBinary.Jun	-668,435	162,652	-4.11	0.00
MonthBinary.Jul	-787,431	163,503	-4.82	0.00
MonthBinary.Aug	-735,477	161,467	-4.56	0.00
MonthBinary.Sep	-822,714	153,106	-5.37	0.00
MonthBinary.Oct	-1,008,850	116,216	-8.68	0.00
MonthBinary.Nov	434,221	244,388	1.78	0.08
COMSGSSplines.AvgT	40,380	12,493	3.23	0.00
COMSGSSplines.ColdAvgT	-154,982	13,846	-11.19	0.00
COMSGSSplines.CoolAvgT	-122,676	17,843	-6.88	0.00
COMSGSSplines.WarmAvgT	52,893	31,227	1.69	0.09
COMSGSSplines.HotAvgT	186,502	13,992	13.33	0.00
COMSGSSplines.ColdDummy	7,622,930	737,962	10.33	0.00
COMSGSSplines.CoolDummy	6,441,156	930,108	6.93	0.00
COMSGSSplines.WarmDummy	-3,105,316	2,053,177	-1.51	0.13
COMSGSSplines.HotDummy	-12,674,556	891,362	-14.22	0.00
COMSGSSplines.ShoulderAvgT	-23,927	5,314	-4.50	0.00
COMSGSSplines.ShoulderCoolAvgT	33,311	16,720	1.99	0.05
COMSGSSplines.ShoulderCoolDummy	-1,556,330	782,745	-1.99	0.05
COMSGSSplines.WkndAvgT	-21,649	2,751	-7.87	0.00
COMSGSSplines.WkndColdAvgT	36,155	10,477	3.45	0.00
COMSGSSplines.WkndColdDummy	-1,490,264	346,027	-4.31	0.00

Note: Five variables with marginal statistical significance (>.05 p-value) were retained in the model because of the interpretive value they provide, given the fact that the coefficients make sense in direction and magnitude and they provide consistency to the model structure.

ComSGS Weather Normalization Energy Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	707
Deg. of Freedom for Error	678
R-Squared	0.950
Adjusted R-Squared	0.948
F-Statistic	461
Prob (F-Statistic)	0.000
Mean Abs. % Err. (MAPE)	0.032
Durbin-Watson Statistic	1.477

ComLGS Weather Normalization Energy Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	18,257,093	826,482	22.09	0.00
DOWBinary.TWT	2,911,896	155,592	18.72	0.00
DOWBinary.MonFri	2,549,842	156,581	16.28	0.00
DOWBinary.Saturday	883,312	76,857	11.49	0.00
MonthBinary.Jan	-274,344	116,283	-2.36	0.02
MonthBinary.Feb	-115,809	112,458	-1.03	0.30
MonthBinary.Mar	979,829	309,742	3.16	0.00
MonthBinary.Apr	1,744,326	332,214	5.25	0.00
MonthBinary.May	994,928	197,420	5.04	0.00
MonthBinary.Jun	-2,641,261	1,077,632	-2.45	0.01
MonthBinary.Jul	-2,700,223	1,080,365	-2.50	0.01
MonthBinary.Aug	-2,218,183	1,077,137	-2.06	0.04
MonthBinary.Sep	-2,350,322	1,053,747	-2.23	0.03
MonthBinary.Oct	1,165,828	164,640	7.08	0.00
MonthBinary.Nov	1,334,576	312,853	4.27	0.00
COMLGSSplines.NonSummerAvgT	-58,422	15,648	-3.73	0.00
COMLGSSplines.NonSummerColdAvgT	-130,357	22,087	-5.90	0.00
COMLGSSplines.NonSummerCoolAvgT	-107,427	16,719	-6.43	0.00
COMLGSSplines.WarmAvgT	178,281	19,237	9.27	0.00
COMLGSSplines.HotAvgT	309,805	9,041	34.27	0.00
COMLGSSplines.NonSummerColdDummy	5,903,069	885,986	6.66	0.00
COMLGSSplines.NonSummerCoolDummy	5,111,746	858,099	5.96	0.00
COMLGSSplines.WarmDummy	-10,113,197	1,086,190	-9.31	0.00
COMLGSSplines.HotDummy	-19,240,130	716,271	-26.86	0.00
COMSGSSplines.ShoulderAvgT	-19,175	6,998	-2.74	0.01
COMSGSSplines.WkndAvgT	-23,434	2,505	-9.35	0.00

ComLGS Weather Normalization Energy Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	685
Deg. of Freedom for Error	659
R-Squared	0.96
Adjusted R-Squared	0.96
F-Statistic	657
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.02
Durbin-Watson Statistic	1.57

ComSPS Weather Normalization Energy Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	65,942,656	6,149,643	10.72	0.00
DOWBinary.MonFri	911,571	20,808	43.81	0.00
DOWBinary.TWT	978,749	19,592	49.96	0.00
DOWBinary.Saturday	185,165	23,853	7.76	0.00
MonthBinary.Jan	129,829	43,278	3.00	0.00
MonthBinary.Feb	195,334	40,402	4.84	0.00
MonthBinary.Mar	-113,527	44,258	-2.57	0.01
MonthBinary.Apr	-694,903	136,963	-5.07	0.00
MonthBinary.May	-552,463	142,180	-3.89	0.00
MonthBinary.Jun	-405,308	144,498	-2.81	0.01
MonthBinary.Jul	-287,907	144,607	-1.99	0.05
MonthBinary.Aug	-471,242	143,943	-3.27	0.00
MonthBinary.Sep	-256,959	142,452	-1.80	0.07
MonthBinary.Oct	-568,317	136,962	-4.15	0.00
MonthBinary.Nov	-522,667	127,615	-4.10	0.00
COMSPSSplines.AvgT	16,466	5,212	3.16	0.00
COMLGSSplines.ColdAvgT	-32,346	7,244	-4.47	0.00
COMSPSSplines.CoolAvgT	-26,293	5,784	-4.55	0.00
COMSPSSplines.WarmAvgT	34,905	5,945	5.87	0.00
COMSPSSplines.HotAvgT	76,743	7,751	9.90	0.00
COMSPSSplines.WinterAvgT	-11,776	2,737	-4.30	0.00
COMLGSSplines.ColdDummy	1,432,662	312,140	4.59	0.00
COMSPSSplines.CoolDummy	1,297,783	303,814	4.27	0.00
COMSPSSplines.WarmDummy	-2,120,453	349,318	-6.07	0.00
COMSPSSplines.HotDummy	-5,301,347	547,340	-9.69	0.00
MonthBinary.TrendVar2	-1,523	153	-9.93	0.00
MonthBinary.Yr2008	-123,464	49,901	-2.47	0.01

Note: The MonthBinary.Sep variable was retained in the model despite being only marginally statistically significant (p-value>.05). The direction and magnitude of the coefficient is reasonable, the standard error is consistent with the other seasonal variables, and the interpretation of all of the seasonal variables is cleaner with the inclusion of this variable.

Com SPS Weather Normalization Energy Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	680
Deg. of Freedom for Error	653
R-Squared	0.95
Adjusted R-Squared	0.95
F-Statistic	480
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.02
Durbin-Watson Statistic	0.93

Com LPS Weather Normalization Energy Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	-10,133,165	4,881,748	-2.08	0.04
DOWBinary.TWT	360,381	34,316	10.50	0.00
DOWBinary.MonFri	327,736	34,614	9.47	0.00
DOWBinary.Saturday	90,826	17,172	5.29	0.00
MonthBinary.Jan	-235,183	30,309	-7.76	0.00
MonthBinary.Feb	-271,362	28,610	-9.49	0.00
MonthBinary.Mar	164,360	121,408	1.35	0.18
MonthBinary.Apr	331,487	123,521	2.68	0.01
MonthBinary.May	-173,679	49,427	-3.51	0.00
MonthBinary.Jun	-73,966	55,221	-1.34	0.18
MonthBinary.Jul	-61,737	55,586	-1.11	0.27
MonthBinary.Aug	98,690	54,892	1.80	0.07
MonthBinary.Sep	154,674	52,359	2.95	0.00
MonthBinary.Oct	87,414	44,419	1.97	0.05
MonthBinary.Nov	627,667	121,899	5.15	0.00
COMLPSSplines.AvgT	20,422	3,381	6.04	0.00
COMLPSSplines.CoolAvgT	-22,196	3,604	-6.16	0.00
COMLPSSplines.WarmAvgT	12,303	3,711	3.32	0.00
COMLPSSplines.HotAvgT	26,594	4,409	6.03	0.00
COMLPSSplines.CoolDummy	1,090,662	178,439	6.11	0.00
COMLPSSplines.WarmDummy	-744,901	208,447	-3.57	0.00
COMLPSSplines.HotDummy	-1,796,542	290,358	-6.19	0.00
MonthBinary.Yr2008	-456,631	37,616	-12.14	0.00
MonthBinary.TrendVar2	-356	123	-2.91	0.00
MonthBinary.TrendVar22	674	100	6.73	0.00
COMLPSSplines.ShoulderAvgT	-10,106	2,156	-4.69	0.00
COMLPSSplines.ShoulderCoolAvgT	9,865	4,655	2.12	0.03
COMLPSSplines.ShoulderCoolDummy	-513,224	196,352	-2.61	0.01
COMLPSSplines.WkndAvgT	-1,934	556	-3.48	0.00

Note: Four monthly binary variables were retained in the model despite being only marginally statistically significant (p-value>.05). The direction and magnitude of the coefficients are reasonable, the standard errors are consistent with the other seasonal variables, and the interpretation of all of the seasonal variables is cleaner with the inclusion of these variables.

Com LPS Weather Normalization Energy Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	690
Deg. of Freedom for Error	661
R-Squared	0.94
Adjusted R-Squared	0.93
F-Statistic	344
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.02
Durbin-Watson Statistic	1.00

Ind SGS Weather Normalization Energy Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	730,447	937,901	0.78	0.44
DOWBinary.Monday	152,016	5,029	30.23	0.00
DOWBinary.Tuesday	155,358	5,017	30.97	0.00
DOWBinary.Wednesday	160,343	5,016	31.97	0.00
DOWBinary.Thursday	154,214	5,058	30.49	0.00
DOWBinary.Friday	154,730	5,082	30.44	0.00
DOWBinary.Saturday	24,214	4,990	4.85	0.00
MonthBinary.Mar	12,992	6,425	2.02	0.04
MonthBinary.Apr	4,506	7,353	0.61	0.54
MonthBinary.May	22,804	8,464	2.69	0.01
MonthBinary.Jun	30,943	10,172	3.04	0.00
MonthBinary.Jul	30,265	10,230	2.96	0.00
MonthBinary.Aug	29,153	9,971	2.92	0.00
MonthBinary.Sep	42,528	9,192	4.63	0.00
MonthBinary.Oct	83,841	7,280	11.52	0.00
MonthBinary.Nov	85,990	6,698	12.84	0.00
INDSGSSplines.AvgT	-1,312	793	-1.65	0.10
INDSGSSplines.CoolAvgT	-3,354	831	-4.04	0.00
INDSGSSplines.WarmAvgT	8,233	948	8.68	0.00
INDSGSSplines.CoolDummy	201,369	48,724	4.13	0.00
INDSGSSplines.WarmDummy	-544,316	61,989	-8.78	0.00
MonthBinary.TrendVar2	-101	11	-8.85	0.00
MonthBinary.TrendVar22	88	27	3.23	0.00

Note: One monthly binary variable and the intercept were retained in the model despite being statistically insignificant (p-value>.05). The direction and magnitude of the coefficients are reasonable, the standard errors are consistent with the other seasonal variables, and the interpretation of all of the seasonal variables is cleaner with the inclusion of these variables. Additionally, the AvgT variable was retained with marginal statistical significance. The temperature range represented by this variable exhibits little load-temperature response, so the coefficient is not expected to be very different from zero and the inclusion of the variable does not cause any model predictions that are unreasonable.

Ind SGS Weather Normalization Energy Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	705
Deg. of Freedom for Error	682
R-Squared	0.84
Adjusted R-Squared	0.84
F-Statistic	168
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.09
Durbin-Watson Statistic	1.18

IndLGS Weather Normalization Energy Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	30,241,212	7,994,770	3.78	0.00
DOWBinary.Monday	1,125,855	42,770	26.32	0.00
DOWBinary.Tuesday	1,353,607	42,715	31.69	0.00
DOWBinary.Wednesday	1,408,126	42,897	32.83	0.00
DOWBinary.Thursday	1,352,458	43,123	31.36	0.00
DOWBinary.Friday	1,018,432	43,231	23.56	0.00
DOWBinary.Saturday	213,337	42,977	4.96	0.00
MonthBinary.Jan	178,174	58,173	3.06	0.00
MonthBinary.Feb	77,426	58,686	1.32	0.19
MonthBinary.Mar	31,156	57,602	0.54	0.59
MonthBinary.Apr	-53,709	60,815	-0.88	0.38
MonthBinary.May	51,176	65,500	0.78	0.43
MonthBinary.Jun	262,358	83,008	3.16	0.00
MonthBinary.Jul	361,442	84,234	4.29	0.00
MonthBinary.Aug	332,081	80,941	4.10	0.00
MonthBinary.Sep	300,228	73,663	4.08	0.00
MonthBinary.Oct	106,422	58,183	1.83	0.07
MonthBinary.Nov	243,911	60,050	4.06	0.00
INDLGSSplines.WarmAvgT	13,002	3,873	3.36	0.00
INDLGSSplines.WarmDummy	-829,556	263,582	-3.15	0.00
MonthBinary.TrendVar2	-1,652	98	-16.84	0.00
MonthBinary.TrendVar22	931	233	3.99	0.00

Note: Five monthly binary variables were retained in the model despite being only marginally statistically significant (p-value>.05). The direction and magnitude of the coefficients are reasonable, the standard errors are consistent with the other seasonal variables, and the interpretation of all of the seasonal variables is cleaner with the inclusion of these variables.

IndLGS Weather Normalization Energy Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	687
Deg. of Freedom for Error	665
R-Squared	0.81
Adjusted R-Squared	0.80
F-Statistic	134
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.09
Durbin-Watson Statistic	0.66

IndSPS Weather Normalization Energy Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	-18,432,124	3,005,652	-6.13	0.00
DOWBinary.Monday	1,145,809	16,082	71.25	0.00
DOWBinary.Tuesday	1,364,279	15,948	85.55	0.00
DOWBinary.Wednesday	1,369,575	15,989	85.66	0.00
DOWBinary.Thursday	1,369,459	16,018	85.50	0.00
DOWBinary.Friday	1,192,004	16,101	74.03	0.00
DOWBinary.Saturday	309,149	15,982	19.34	0.00
MonthBinary.Jan	-56,160	18,621	-3.02	0.00
MonthBinary.Mar	-122,663	19,467	-6.30	0.00
MonthBinary.Apr	21,810	21,924	1.00	0.32
MonthBinary.May	98,302	25,470	3.86	0.00
MonthBinary.Jun	244,636	31,093	7.87	0.00
MonthBinary.Jul	179,407	31,787	5.64	0.00
MonthBinary.Aug	193,915	30,613	6.33	0.00
MonthBinary.Sep	177,944	27,790	6.40	0.00
MonthBinary.Oct	56,300	21,346	2.64	0.01
MonthBinary.Nov	27,744	20,500	1.35	0.18
INDSPSSplines.WarmAvgT	8,279	1,329	6.23	0.00
INDSPSSplines.HotAvgT	28,918	2,326	12.43	0.00
INDSPSSplines.WarmDummy	-462,517	77,514	-5.97	0.00
INDSPSSplines.HotDummy	-2,017,764	181,630	-11.11	0.00
MonthBinary.TrendVar2	-1,699	36	-46.85	0.00
MonthBinary.TrendVar22	2,211	87	25.27	0.00

Note: Two monthly binary variables were retained in the model despite being only marginally statistically significant (p-value>.05). The direction and magnitude of the coefficients are reasonable, the standard errors are consistent with the other seasonal variables, and the interpretation of all of the seasonal variables is cleaner with the inclusion of these variables.

IndSPS Weather Normalization Energy Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	680
Deg. of Freedom for Error	657
R-Squared	0.97
Adjusted R-Squared	0.97
F-Statistic	891
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.03
Durbin-Watson Statistic	1.34

Ind LPS Weather Normalization Energy Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	5,384,565	43,448	123.93	0.00
DOWBinary.Monday	704,450	34,076	20.67	0.00
DOWBinary.Tuesday	815,307	33,509	24.33	0.00
DOWBinary.Wednesday	854,031	33,489	25.50	0.00
DOWBinary.Thursday	900,454	33,665	26.75	0.00
DOWBinary.Friday	724,110	33,816	21.41	0.00
DOWBinary.Saturday	169,835	33,438	5.08	0.00
MonthBinary.Jan	47,156	48,816	0.97	0.33
MonthBinary.Feb	-149,618	49,173	-3.04	0.00
MonthBinary.Mar	-534,653	60,873	-8.78	0.00
MonthBinary.Apr	344,986	68,371	5.05	0.00
MonthBinary.May	535,454	77,026	6.95	0.00
MonthBinary.Jun	431,598	83,772	5.15	0.00
MonthBinary.Jul	389,095	82,780	4.70	0.00
MonthBinary.Aug	465,360	82,669	5.63	0.00
MonthBinary.Sep	190,880	80,341	2.38	0.02
MonthBinary.Oct	25,576	69,457	0.37	0.71
MonthBinary.Nov	-14,685	71,570	-0.21	0.84
INDLPSSplines.WarmAvgT	12,338	3,020	4.09	0.00
INDLPSSplines.HotAvgT	16,071	3,178	5.06	0.00
INDLPSSplines.WarmDummy	-681,180	165,629	-4.11	0.00
INDLPSSplines.HotDummy	-904,166	238,843	-3.79	0.00

Note: Three monthly binary variables were retained in the model despite being only marginally statistically significant (p-value>.05). The direction and magnitude of the coefficients are reasonable, the standard errors are consistent with the other seasonal variables, and the interpretation of all of the seasonal variables is cleaner with the inclusion of these variables.

Ind LPS Weather Normalization Energy Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	345
Deg. of Freedom for Error	323
R-Squared	0.92
Adjusted R-Squared	0.91
F-Statistic	174
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.02
Durbin-Watson Statistic	1.27

Wholesale Weather Normalization Energy Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	-7,013,794	971,124	-7.22	0.00
DOWBinary.Monday	106,151	5,269	20.15	0.00
DOWBinary.Tuesday	106,370	5,204	20.44	0.00
DOWBinary.Wednesday	107,273	5,218	20.56	0.00
DOWBinary.Thursday	106,759	5,285	20.20	0.00
DOWBinary.Friday	89,705	5,314	16.88	0.00
DOWBinary.Saturday	16,428	5,256	3.13	0.00
MonthBinary.Jan	-15,506	7,064	-2.20	0.03
MonthBinary.Feb	-35,902	7,100	-5.06	0.00
MonthBinary.Mar	-42,338	8,105	-5.22	0.00
MonthBinary.Apr	-69,726	9,466	-7.37	0.00
MonthBinary.May	-46,975	7,582	-6.20	0.00
MonthBinary.Sep	-53,323	6,677	-7.99	0.00
MonthBinary.Oct	-99,350	8,744	-11.36	0.00
MonthBinary.Nov	-95,976	9,310	-10.31	0.00
WHSLSplines.AvgT	-2,028	826	-2.46	0.01
WHSLSplines.CoolAvgT	-5,367	916	-5.86	0.00
WHSLSplines.WarmAvgT	20,909	1,250	16.72	0.00
WHSLSplines.HotAvgT	38,955	1,501	25.95	0.00
WHSLSplines.CoolDummy	272,779	50,124	5.44	0.00
WHSLSplines.WarmDummy	-1,347,343	82,102	-16.41	0.00
WHSLSplines.HotDummy	-2,727,467	112,647	-24.21	0.00
WHSLSplines.WinterAvgT	-892	217	-4.11	0.00
WHSLSplines.ShoulderWarmAvgT	-8,330	3,142	-2.65	0.01
WHSLSplines.ShoulderWarmDummy	560,041	212,818	2.63	0.01
MonthBinary.TrendVar2	-228	12	-19.07	0.00
MonthBinary.TrendVar22	424	28	14.98	0.00

Wholesale Weather Normalization Energy Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	709
Deg. of Freedom for Error	682
R-Squared	0.95
Adjusted R-Squared	0.95
F-Statistic	510
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.03
Durbin-Watson Statistic	1.07

Weather Normalized Peak Demand Models[27]

Residential Weather Normalization Peak Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	1,175,582	589,158	2.00	0.05
DOWBinary.Monday	-17,063	25,137	-0.68	0.50
DOWBinary.Tuesday	-79,306	24,963	-3.18	0.00
DOWBinary.Wednesday	-86,738	25,082	-3.46	0.00
DOWBinary.Thursday	-94,368	24,976	-3.78	0.00
DOWBinary.Friday	-132,233	24,811	-5.33	0.00
DOWBinary.Saturday	-116,225	24,803	-4.69	0.00
MonthBinary.Jan	-136,378	36,764	-3.71	0.00
MonthBinary.Feb	-204,643	36,064	-5.67	0.00
MonthBinary.Mar	-70,292	174,418	-0.40	0.69
MonthBinary.Apr	-149,615	175,980	-0.85	0.40
MonthBinary.May	-598,025	68,537	-8.73	0.00
MonthBinary.Jun	-434,129	76,385	-5.68	0.00
MonthBinary.Jul	-370,088	76,976	-4.81	0.00
MonthBinary.Aug	-309,306	76,212	-4.06	0.00
MonthBinary.Sep	-561,274	72,737	-7.72	0.00
MonthBinary.Oct	-545,480	57,722	-9.45	0.00
MonthBinary.Nov	-72,601	174,462	-0.42	0.68
ResSplines.AvgT	13,628	9,559	1.43	0.15
ResSplines.ColdAvgT	-49,833	9,850	-5.06	0.00
ResSplines.CoolAvgT	-36,193	9,774	-3.70	0.00
ResSplines.WarmAvgT	72,438	10,407	6.96	0.00
ResSplines.HotAvgT	100,262	13,047	7.69	0.00
ResSplines.ColdDummy	2,555,785	593,255	4.31	0.00
ResSplines.CoolDummy	2,119,982	601,272	3.53	0.00
ResSplines.WarmDummy	-4,807,366	668,753	-7.19	0.00
ResSplines.HotDummy	-7,045,156	946,488	-7.44	0.00
ResSplines.ShoulderAvgT	-6,976	3,659	-1.91	0.06
ResSplines.ShoulderColdAvgT	23,164	11,617	1.99	0.05
ResSplines.ShoulderWarmAvgT	-45,922	14,731	-3.12	0.00
ResSplines.ShoulderHotAvgT	-7,409	2,537	-2.92	0.00
ResSplines.ShoulderColdDummy	-751,328	405,901	-1.85	0.06
ResSplines.ShoulderWarmDummy	3,033,489	1,022,926	2.97	0.00

Note: Three monthly binary variables and one weekday binary variable were retained in the model despite being statistically insignificant0 (p-value>.05). The direction and magnitude of the coefficients are

[27] 4 CSR 240-22.030(1)(C)2.C.; 4 CSR 240-22.030(2)(B); EO-2007-0409 – Stipulation and Agreement #11

reasonable, the standard errors are fairly consistent with the other seasonal and weekday variables, and the interpretation of all of the seasonal and weekday variables is cleaner with the inclusion of these variables. Additionally, the AvgT variable was retained with marginal statistical significance. The temperature range represented by this variable exhibits little load-temperature response, so the coefficient is not expected to be very different from zero and the inclusion of the variable does not cause any model predictions that are unreasonable.

Residential Weather Normalization Peak Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	699
Deg. of Freedom for Error	666
R-Squared	0.91
Adjusted R-Squared	0.91
F-Statistic	213
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.06
Durbin-Watson Statistic	1.63

Com SGS Weather Normalization Peak Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	385,147	75,501	5.10	0.00
DOWBinary.TWT	38,400	14,950	2.57	0.01
DOWBinary.MonFri	30,336	14,936	2.03	0.04
DOWBinary.Saturday	33,382	4,164	8.02	0.00
MonthBinary.Mar	-21,142	5,481	-3.86	0.00
MonthBinary.Apr	-10,235	6,154	-1.66	0.10
MonthBinary.May	-1,836	7,067	-0.26	0.80
MonthBinary.Jun	20,549	8,600	2.39	0.02
MonthBinary.Jul	6,034	8,714	0.69	0.49
MonthBinary.Aug	21,892	8,515	2.57	0.01
MonthBinary.Sep	16,879	7,825	2.16	0.03
MonthBinary.Oct	-14,443	6,302	-2.29	0.02
MonthBinary.Nov	-14,988	5,625	-2.67	0.01
COMSGSSplines.AvgT	1,377	1,308	1.05	0.29
COMSGSSplines.ColdAvgT	-6,456	1,362	-4.74	0.00
COMSGSSplines.CoolAvgT	-4,346	1,506	-2.89	0.00
COMSGSSplines.WarmAvgT	7,211	1,709	4.22	0.00
COMSGSSplines.HotAvgT	12,203	1,407	8.67	0.00
COMSGSSplines.ColdDummy	327,971	76,195	4.30	0.00
COMSGSSplines.CoolDummy	232,910	83,190	2.80	0.01
COMSGSSplines.WarmDummy	-429,915	104,854	-4.10	0.00
COMSGSSplines.HotDummy	-795,216	85,366	-9.32	0.00
COMSGSSplines.WkndAvgT	-2,768	224	-12.34	0.00
COMSGSSplines.WkndColdAvgT	3,782	695	5.44	0.00
COMSGSSplines.WkndColdDummy	-176,347	25,160	-7.01	0.00

Note: Three monthly binary variables were retained in the model despite being statistically insignificant (p-value>.05). The direction and magnitude of the coefficients are reasonable, the standard errors are consistent with the other seasonal variables, and the interpretation of all of the seasonal variables is cleaner with the inclusion of these variables. Additionally, the AvgT variable was retained despite being only marginally statistically significant. The temperature range represented by this variable exhibits little load-temperature response, so the coefficient is not expected to be very different from zero and the inclusion of the variable does not cause any model predictions that are unreasonable.

Com SGS Weather Normalization Peak Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	707
Deg. of Freedom for Error	682
R-Squared	0.94
Adjusted R-Squared	0.94
F-Statistic	450
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.05
Durbin-Watson Statistic	2.32

Com LGS Weather Normalization Peak Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	788,495	71,324	11.06	0.00
DOWBinary.TWT	294,206	5,273	55.79	0.00
DOWBinary.MonFri	274,629	5,632	48.76	0.00
DOWBinary.Saturday	46,303	6,504	7.12	0.00
MonthBinary.Mar	23,587	8,706	2.71	0.01
MonthBinary.Apr	58,476	9,835	5.95	0.00
MonthBinary.May	86,600	11,130	7.78	0.00
MonthBinary.Jun	-141,619	94,922	-1.49	0.14
MonthBinary.Jul	-157,687	95,184	-1.66	0.10
MonthBinary.Aug	-121,622	94,874	-1.28	0.20
MonthBinary.Sep	-108,037	92,813	-1.16	0.24
MonthBinary.Oct	79,816	9,955	8.02	0.00
MonthBinary.Nov	33,978	9,070	3.75	0.00
COMLGSSplines.NonSummerAvgT	-3,411	1,350	-2.53	0.01
COMLGSSplines.NonSummerColdAvgT	-4,049	1,493	-2.71	0.01
COMLGSSplines.NonSummerCoolAvgT	-4,339	1,790	-2.42	0.02
COMLGSSplines.WarmAvgT	12,145	1,636	7.42	0.00
COMLGSSplines.HotAvgT	15,224	759	20.06	0.00
COMLGSSplines.NonSummerColdDummy	201,550	73,469	2.74	0.01
COMLGSSplines.NonSummerCoolDummy	206,119	87,861	2.35	0.02
COMLGSSplines.WarmDummy	-673,894	90,214	-7.47	0.00
COMLGSSplines.HotDummy	-874,049	60,887	-14.36	0.00

Note: Four monthly binary variables and one weekday binary variable were retained in the model despite being only marginally statistically significant (p-value>.05). The direction and magnitude of the coefficients are reasonable and the interpretation of all of the seasonal variables is cleaner with the inclusion of these variables.

Com LGS Weather Normalization Peak Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	685
Deg. of Freedom for Error	663
R-Squared	0.94
Adjusted R-Squared	0.93
F-Statistic	462
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.03
Durbin-Watson Statistic	1.87

Com SPS Weather Normalization Peak Model Coefficients

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	1,904,164	82,389	23.11	0.00
DOWBinary.Monday	39,547	2,753	14.36	0.00
DOWBinary.Tuesday	39,848	2,730	14.60	0.00
DOWBinary.Wednesday	40,765	2,748	14.83	0.00
DOWBinary.Thursday	41,023	2,752	14.91	0.00
DOWBinary.Friday	36,408	2,751	13.24	0.00
DOWBinary.Saturday	10,077	1,312	7.68	0.00
MonthBinary.Feb	5,702	1,660	3.44	0.00
MonthBinary.Mar	-27,810	7,421	-3.75	0.00
MonthBinary.Apr	-25,242	7,799	-3.24	0.00
MonthBinary.May	-75,138	12,483	-6.02	0.00
MonthBinary.Jun	-71,411	12,921	-5.53	0.00
MonthBinary.Jul	-69,242	12,936	-5.35	0.00
MonthBinary.Aug	-72,775	12,904	-5.64	0.00
MonthBinary.Sep	-59,303	12,744	-4.65	0.00
MonthBinary.Oct	-68,181	11,822	-5.77	0.00
MonthBinary.Nov	-20,121	7,524	-2.67	0.01
MonthBinary.TrendVar	-40	2	-19.80	0.00
COMSPSSplines.AvgT	798	216	3.69	0.00
COMSPSSplines.CoolAvgT	-396	243	-1.63	0.10
COMSPSSplines.WarmAvgT	1,895	222	8.53	0.00
COMSPSSplines.HotAvgT	3,514	276	12.72	0.00
COMSPSSplines.WinterAvgT	-1,312	244	-5.37	0.00
COMSPSSplines.CoolDummy	15,934	8,134	1.96	0.05
COMSPSSplines.WarmDummy	-100,316	12,180	-8.24	0.00
COMSPSSplines.HotDummy	-220,833	18,042	-12.24	0.00
COMSPSSplines.ShoulderAvgT	-889	164	-5.41	0.00
COMSPSSplines.WkndAvgT	-444	43	-10.40	0.00

Note: The CoolAvgT variable was retained in the model despite being only marginally statistically significant (p-value>.05) because the coefficient makes sense in magnitude and direction and the standard error is consistent with the other weather spline variables.

Com SPS Weather Normalization Peak Models Statistics

Model Statistic	Value of the Statistic
Adjusted Observations	680
Deg. of Freedom for Error	652
R-Squared	0.95
Adjusted R-Squared	0.95
F-Statistic	506
Prob (F-Statistic)	0.00
Mean Abs. % Err. (MAPE)	0.02
Durbin-Watson Statistic	1.15